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To examine the opinion leadership phenomenon as an element of a change strategy for agricultural education, a means of identifying personal and social characteristics of teachers identified as opinion leaders was developed. Chi square, t test, and Spearman's rank-order correlation were used to analyze data obtained by group interviews from 272 of the 279 vocational agriculture teachers in South Carolina. Individuals nominated four or more times by their peers as sources of advice and information were identified in 11 areas of the vocational agriculture program and were considered to be opinion leaders. Twenty-one of the 51 opinion leaders identified were influential in more than one area of the vocational agriculture program. 72 percent of the opinion leaders selected other opinion leaders as their source of advice and information. 35 percent of vocational agriculture teachers selected other teachers as the source from which they got advice and information. The personal and social characteristics of opinion leaders found to be significant indicated that they tended to be older, had taught longer, had attained a higher educational level, had a higher salary and held a greater number of educational offices than their fellow teachers. ED 023 858 is a related document. (D-)

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RESEARCH 40

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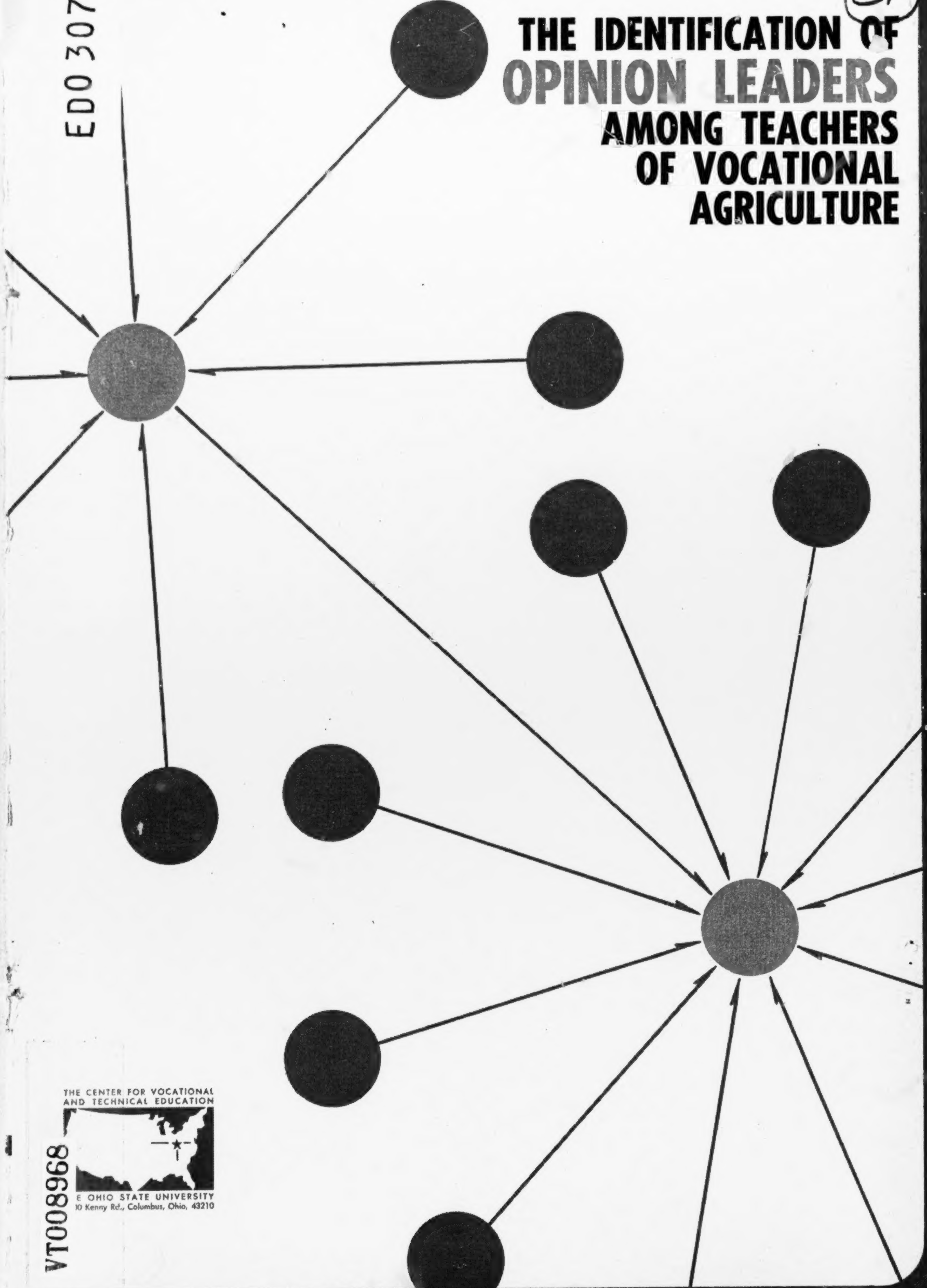
THE IDENTIFICATION OF OPINION LEADERS AMONG TEACHERS OF VOCATIONAL AGRICULTURE



THE CENTER FOR VOCATIONAL
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The major objectives of The Center follow:

1. To provide continuing reappraisal of the role and function of vocational and technical education in our democratic society;

2. To stimulate and strengthen state, regional, and national programs of applied research and development directed toward the solution of pressing problems in vocational and technical education;

3. To encourage the development of research to improve vocational and technical education in institutions of higher education and other appropriate settings;

4. To conduct research studies directed toward the development of new knowledge and new applications of existing knowledge in vocational and technical education;

5. To upgrade vocational education leadership (state supervisors, teacher educators, research specialists, and others) through an advanced study and inservice education program;

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RESEARCH 40.

Final Report
On a Project Conducted Under
Project No. 7-[illegible]0158
Grant No. OEG-3-7-000158-2037

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THE IDENTIFICATION OF OPINION LEADERS AMONG TEACHERS OF VOCATIONAL AGRICULTURE, Final Report.

2

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PREFACE

Vocational educators and others have long been confronted with the problems in accelerating the adoption of innovations in a social structure. A wide range of strategies and research traditions have been examined to identify relevant and viable approaches. The rural sociology model for diffusion and adoption has placed considerable emphasis on the role of opinion leaders and their influence on other adapter categories. In assessing the applicability of this model to vocational education, it is appropriate in an initial phase of a research program to determine the feasibility of various procedures for identifying opinion leaders among vocational teachers. This initial study of the identification of opinion leadership of teachers of vocational agriculture represents a step toward a major Center program in the change process.

The publication was prepared by James W. Hensel, Center specialist in agricultural education, and Cecil H. Johnson, Jr., research associate at The Center. Garry R. Bice, research associate at The Center, provided assistance in editing. The Center greatly appreciates the help of Daryl Hobbs, University of Missouri, and William Hull, Oklahoma State University, for their reviews of this report.

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Robert E. Taylor
Director
The Center for Vocational
and Technical Education

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SUMMARY

PURPOSE AND OBJECTIVES

The central purpose of this project was to gain insight and understanding of the opinion leadership phenomenon as an element of a change strategy.

The specific objectives were:

1. To develop a means of identifying opinion leaders among teachers of vocational agriculture;
2. To determine selected personal and social characteristics of opinion leaders among teachers of vocational agriculture.

METHODS AND PROCEDURES

Two steps were followed to secure the data analyzed in the study. First, a review of relevant literature and research was conducted to determine techniques of identifying opinion leaders. The sociometric, self-designating and key informant techniques of identifying opinion leaders were utilized in the study.

Secondly, a questionnaire designed to determine selected personal and social characteristics of opinion leaders among teachers of vocational agriculture was administered to 272 of 279 vocational agriculture teachers in South Carolina, representing 97.49 percent of the teachers teaching at the time the study was conducted.

RESULTS

Opinion leaders among vocational agriculture teachers could be isolated from their peers by utilizing the sociometric technique. To be classified as an opinion leader, an individual teacher must have been nominated a minimum of four times by his peers as a source of advice and information in a specific area of the vocational agriculture program.

Opinion leaders were identified in each of 11 areas of the vocational agriculture program. These areas included plant science, animal science, FFA, work experience, agricultural mechanics, farm management, horticulture, agricultural supply, young farmers, adult farmers, and administration of a department. The number of opinion leaders identified ranged from 16 in the FFA area to three in the area of specialized programs in agricultural supply.

A high degree of interrelationship was observed among the several questions that made up the total sociometric score. Twenty-one of the 51 opinion leaders identified were influential in more than one area of the vocational agricultural program. The sociometric data indicated that opinion leaders sought out other opinion leaders as their source of advice and information. Seventy-two percent of the opinion leaders selected other opinion leaders as their source of advice and information.

Personal influence of the opinion leader played an important role in the exchange of ideas among the teachers. Thirty-five percent of the vocational agriculture teachers indicated that other teachers of vocational agriculture were the source from which they sought advice and information when faced with a problem in their instructional program.

There was no significant correlation between the sociometric and self-designating techniques of identifying opinion leaders. There was a significant positive correlation between the sociometric and key informant techniques of identifying opinion leaders in five of the six supervisory districts in South Carolina. In the remaining district the correlation was positive but not significant at the .05 level.

Generally, opinion leaders did not differ enough from their peers in personal and social characteristics to provide a consistent and positive means for identification. The personal and social characteristics of opinion leaders which were found to be significant indicated that they tended to be older, had taught longer, had attained a higher educational level, had a higher salary and had held a greater number of educational offices than their fellow teachers.

THE
IDENTIFICATION OF
OPINION LEADERS
AMONG TEACHERS OF
VOCATIONAL AGRICULTURE

I

INTRODUCTION

Considerable investments are being made to research, develop and refine various types of educational innovations applicable to vocational education. However, education has been plagued by the theory-practice gap--the lag between the time improved methods and procedures are developed and their eventual use in the appropriate school setting.

The ultimate criterion for considering the worth of a developmental research project resides in its effect on practice. If research activities are to contribute to the improvement of vocational and technical education, then researchers must recognize and understand the process of change. Researchers must first discover workable solutions to practical problems and then accept the responsibility of facilitating the diffusion of the research to the level of the practitioner.

The study of opinion leaders was initiated at The Center for Vocational and Technical Education as a pilot project to determine whether a larger effort in the study of the change process would be a fruitful area for future research.

In the past few years, researchers and state supervisors in agricultural education have become particularly concerned with the lag between research and practice. An additional concern has been the feeling that a large proportion of the research findings remain on a library shelf and never find their way into the classroom. It has been suggested that one of the causes of this gap has been the lack of a linking agent or interpreter between the researcher and the teacher.

In agricultural education, for example, the traditional link between the teacher and the state office has been the district supervisor. Recently, however, district supervisory staff members have found it increasingly difficult to maintain direct contact with each teacher in the district. It has been suggested that more efficient methods for supervision be explored. As a result, the Center research staff felt that if change process theories developed by rural sociology could be adapted to a segment of vocational education, that they might provide some insight toward solving problems created by the theory-practice gap.

Generally, the process of change is expected to follow along the lines of the adoption process--the mental process through which an individual passes from first hearing about an innovation to final adoption. This process is generally considered to consist of five distinct stages:

1. The awareness stage--the individual is exposed to the innovation but lacks complete information about it.

2. The interest stage--the individual becomes interested in the new idea and seeks additional information about it.

3. The evaluation stage--the individual mentally applies the innovation to his present and anticipated future situation, then decides whether or not to try it.

4. Trial stage--the individual uses the innovation on a small scale in order to determine its utility in his own situation.

5. The adoption stage--the individual decides to continue the full use of the innovation (Rogers, 1962a, pp. 81-86).

Change in the American school system generally follows the five stages of the adoption process, but it is usually a very slow procedure due to a large number of confounding factors.

Recent evidence of the slowness of schools to adopt educational innovations was provided by Anderson (1966, p.50) when he stated that an innovation in education had been estimated to take 30 years before widespread adoption and 10 to 15 years for the first three percent of schools to make a significant change. Even though the adoption of educational innovations has increased in recent years, the time span required for a large number of schools to incorporate an innovation into the school program continues to be lengthy.

Considering the sluggish rate of adoption of educational innovations, state leaders in vocational agricultural education should give consideration to the investigation of any viable method of communication which would spread the use of innovations found to be useful in program development or improvement. Educational leaders may have placed too much emphasis on the effectiveness of wholesale methods of communication designed to create awareness of new developments. An investigation of other fields of endeavor, in which attempts have been made to employ the findings of research to affect practices, leads to the conclusion that a much more dynamic mechanism for the dissemination of educational innovations is needed.

The diffusion model employed by the Agricultural Extension Service represents a planned program of change. This model usually consists of five distinct steps:

1. The Agricultural Extension Service has access to experiment stations in which agronomists and other basic researchers in the field of agriculture may carry out the experiments which problems in the field indicate ought to be pursued.

2. The researcher, far from talking directly to the farmer, talks instead to a university-based extension specialist.

3. The extension specialist talks to county agents.

4. The county agents deal primarily with a selected group of farmers in their counties who may be thought of as local innovators or cosmopolites.

5. These innovators in turn act as demonstration agents for the remainder of the farmers in the district. Only at this stage does the large mass of farmers come into contact with the ideas that were originally developed in the agronomists' laboratory. (Guba, 1965, p. 2)

Guba indicated that a similar agency is needed in education to close the theory-practice gap. Guba (1965, p.2) stated that "the fundamental differences between agriculture and education are obvious and the mechanism to close the gap in education may be different from the one so successful in agriculture. Nevertheless, there can be no doubt that some kind of mechanism is needed and we obviously need to start now to conceptualize and to build such mechanisms."

Dissemination efforts in vocational and technical education are somewhat similar to the model employed by the Agricultural Extension Service. New ideas and innovations are developed by researchers, either university or research center-based, and made available to state leaders (supervisors and teacher educators). The state leaders then attempt to influence high school teachers to incorporate ideas and innovations into the local program of vocational and technical education. However, most efforts by teacher educators and supervisors are conducted on a wholesale basis, i.e., group meetings, conferences, workshops, graduate classes, newsletters and magazine articles.

The success of the Extension Service in disseminating new ideas with a rapid rate of adoption by key farmers suggests that state vocational and technical education leaders give consideration to concentrating their efforts on a few selected individuals in addition to the efforts aimed at creating awareness of innovations on the part of all teachers. The key factor in adapting the Extension Service diffusion model to vocational education is the selection of the individuals who in effect become the "linkage" between the educational leaders and the teachers of the state. In the extension model these individuals are described as innovators or cosmopolites. However, rural sociologists indicate that the innovator may not be a respected leader of change . . . thus, the innovator may not be identified as influential in his social system, but he may set the stage for change by demonstrating new ideas to local opinion leaders. (Rogers, 1962a, p. 193)

One implication for a strategy of change is for change agents to concentrate their efforts upon opinion leaders. (Rogers, 1962a, p. 257) The existence of opinion leaders in a social system offers change agents a "handle" whereby they can prime the pump from which new ideas flow through an audience via the "trickle-down" process. (Rogers, 1962a, p. 282) Briefly, this strategy for change implies that the change agent should locate opinion leaders and concentrate his promotional efforts on these individuals, allowing the new idea or innovation being promoted to spread via word-of-mouth channels from the opinion leader to the remainder of the change agent's audience.

In order to utilize this strategy in agricultural education, the vocational agriculture teachers who are regarded as opinion leaders by their peers must be identified. Do these individuals differ significantly from their peers in personal and social characteristics? Are they easily identifiable? Is an opinion leader in one area of vocational agriculture also the opinion leader in other areas? Do opinion leaders realize that they are regarded as opinion leaders by their peers? Only after these and other questions concerning the attributes of opinion leaders among teachers of vocational agriculture have been answered can appropriate procedures be designed to capitalize fully on the influence which these individuals may exert on their peers.

II

THE PROBLEM

PURPOSE AND OBJECTIVES

The central purpose of this study was to gain insight and understanding of the opinion leadership phenomenon as an element of a change strategy.

The specific objectives of the study were:

1. To develop a means of identifying opinion leaders among teachers of vocational agriculture
2. To determine selected personal and social characteristics of opinion leaders among teachers of vocational agriculture.

THEORETICAL BASES FOR THE STUDY

Seven statements were identified as being essential to the development of a theoretical base for the study and formed the bases from which the working hypotheses were determined.

1. Innovations spread from sources of new ideas via relevant channels to opinion leaders and from them by way of personal communication channels to their followers.
2. Essential to the idea of a two-step flow of information is a distinction between leaders and their followers.
3. All individuals do not exert an equal amount of influence on the adoption decisions of others.
4. Teachers of vocational agriculture are typical of people in other vocations in that they rely heavily upon personal influence from others when involved in decision-making situations.
5. These sources of personal influence vary according to the area in which the teacher of vocational agriculture is faced with the decision-making process.
6. A high degree of personal influence is concentrated in the hands of a relatively small portion of the total population of teachers of vocational agriculture.
7. Opinion leaders can be identified by the persons upon whom they exert influence.

HYPOTHESES

From the theoretical base, a set of null hypotheses to be tested were determined. The hypotheses were:

1. There are no significant differences between the sociometric, self-designating and key informant techniques of identifying opinion leaders.
2. There are no significant differences between vocational agriculture teachers who have been designated as opinion leaders and their peers when the following characteristics are examined:

    a. age
    b. years of teaching experience
    c. number of different teaching positions held
    d. educational achievement level
    e. personal investments in professional improvement
    f. salary
    g. offices held in educational organizations
    h. cosmopolitism
    i. sources of information
    j. publications read
    k. social participtation
    l. job satisfaction
    m. innovativeness
    n. conformity to social system norms on innovativeness

DELIMITATIONS OF THE STUDY

The boundaries of this study were the teachers of vocational agriculture in the State of South Carolina who were teaching at the time of the investigation.

In determining the relative innovativeness of individual teachers it was decided to restrict this study to the professional aspects involving educational innovations useful in improving the instructional program. This decision was made because of the variation in agriculture from one area of the state to another. This factor would have made it difficult to select technical agricultural innovations having universal applicability to teachers of vocational agriculture in the state.

This study was not intended to be an evaluation of the present program of vocational agriculture being conducted in the state, nor was it intended to be an evaluation of the teacher education and supervisory programs in South Carolina.

The study was concerned only with the individual teacher of agriculture and did not entail a study of the school or community in which the teacher was employed. In addition, no attempt was made to study the cause-effect relationships of the opinion leadership phenomenon.

Futher limitations of the study included:

1. The identification of opinion leaders by their peers would be subject to some error since the methods of identification assumed a hypothetical situation--that teachers were considering making a major change in their programs of vocational agriculture.

2. It was realized that in forcing teachers to name only one teacher of vocational agriculture in each area, some danger existed that they might be influenced in their responses by the teacher with whom they had the most recent contact.

3. Determining innovativeness of individual teachers would be influenced by the applicability of the innovations selected for use in the innovativeness scale.

4. A related limitation encountered in all innovativeness studies is the unknown and varying ability of respondents to recall the exact date on which they first incorporated an innovation into their program.

5. Teachers were requested to estimate their responses to such personal questions as the amount of personal money invested in professional improvement, the number of departments of instruction visited, etc., if they could not recall exact figures. It was decided, however, that the teachers were the only realistic source of data for the items of a personal nature.

REVIEW OF RELATED RESEARCH

Sociologists once viewed America as a "mass society" in which the mass media communicated in a one-way fashion with individuals who communicated little with each other. The mass media were seen as an all-powerful influence on behavior. (Rogers, 1962a, p. 211)

This view continued to be prevalent until a study of the 1940 presidential election by Lazarfield, Berelson and Gaudet (1948, p. 151) led to the suggestion that the flow of mass communications may be less direct than was commonly supposed. The authors hypothesized that influences stemming from the mass media first reach "opinion leaders" who, in turn, pass on what they read and hear to those of their everyday associates for whom they are influential. This hypothesis has become known as the "two-step flow of communication hypothesis."

The evidence in the 1940 voting study which led to the original formulation of the "two-step hypothesis" involved three distinct sets of findings. The first finding was related to the impact of personal influence. The authors reported that people who made up their minds late in the campaign were more likely than others to mention personal influence as having figured in their decisions. In addition, on an average day, a greater number of people reported participating in a discussion of the election than reported hearing a campaign speech or reading a newspaper editorial related to the election campaign. From these data the investigators concluded that personal contacts appear to have been more frequent and more effective than the mass media in influencing voting decisions. (Lazarfield, *et al*, 1948, pp. 135-152)

The second finding that aided in the formulation of the hypothesis concerned the flow of personal influence. As interpersonal influence was evidently important in the decision-making the investigators attempted to ascertain whether certain individuals were more important than others in the transmission of influence. Individuals were asked whether they had recently tried to convince others of their political convictions and whether they had recently been asked for their advice on a political question. When the identified "opinion leaders" were compared with others they were found to be more interested in the election. Opinion leaders were found to be evenly distributed throughout every class and occupation. The investigators concluded that opinion leaders did exist and that they were very much like the people they influenced. (Lazarfield, *et al*, pp. 50-51)

The third major finding of the research concerned opinion leaders and their relationship to the mass media. Opinion leaders, when compared to the remainder of the population, were found to be more exposed to the radio, newspapers, and magazines . . . the formal media of communications. (Lazarfield, *et al*, 1948, pp. 50-51)

Lazarfield, Berelson, and Gaudet (1948, p. 151) summed up the findings of the study into the "two-step flow of information hypothesis." In essence: If word-of-mouth is so important, and if word-of-mouth specialists are widely dispersed, and if these specialists are more exposed to the media than the people they influence, then perhaps ideas often flow from radio and print to opinion leaders and from these to the less active members of the population.

Rogers implied that a reformulation of the "two-step hypothesis" suggests that innovations spread from sources of new ideas via relevant channels to opinion leaders and from them by way of personal communications channels to their followers. Rogers (1962a, p. 213) also stated that it is likely that the first "step," from sources of new information to opinion leaders, is mainly a transfer of information, while the second "step," from opinion leaders to their followers, may also involve the spread of influence.

Berelson, Lazarfield and McPhee (1954, p. 110) reported a study of the 1948 Presidential election which initiated the use of the self-designating technique of identifying opinion leaders. The interesting contribution of this research was that those people who were singled out as opinion leaders sought advice on politics more than others, indicating that there must be unending circuits of leadership relationships running throughout a community, like a nerve system through the body.

The researchers attempted to determine the qualities which distinguished these informal leaders. Among these characteristics were:

1. Opinion leaders held a particular interest and competence in the sphere of discussion for which they led.
2. Opinion leaders had greater interaction through more strategic social locations.
3. Opinion leaders symbolized the given group's norms in a particular sphere. (Berelson, *et al*, 1954, pp. 110-113)

The investigators also reported that the opinion leaders within each socioeconomic status level were somewhat more likely to come from the better-educated members of the group, but not to the point of putting the opinion leader out of touch with the group.

This study pointed out that white-collar people look more to professional and managerial people as their opinion leaders and that semi-skilled and unskilled workers look to the skilled worker. This indicated that opinion leaders are distinctive without being too distinctive. (Berelson, *et al*, 1954, p. 412)

The two studies previously cited studied the flow of personal influence and opinion leadership from the standpoint of an individual's designation of himself or lack of designation of himself as an opinion leader. The data consisted, in other words, of two statistical groupings: people who said they were advice-givers and those who did not. On the basis of such data it could not be concluded that opinion leaders actually influenced those people who were not opinion leaders. Thus, the "two-step flow hypothesis" had not been fully documented at this point in time. Only by investigating the interaction between advisors and advisees could the "two-step flow hypothesis" be accepted. (Katz, 1957, p. 64)

The "Rovere" study conducted by Merton (1957) undertook the task of studying the relationship between the advisor and advisee. This study utilized the sociometric technique to identify persons to whom others turned for advice and information regarding a variety of matters. Once the opinion leaders were identified a number were sought out and interviewed.

The Merton (1957, p. 393) study contributed to the growing body of knowledge concerning opinion leaders by classifying opinion leaders as local, cosmopolitan, monomorphic and polymorphic influentials. The local influential was defined as largely confining his interests to the community; he was preoccupied with local problems, to the virtual exclusion of the national and international scene. The cosmopolitan influential was defined as an opinion leader who was oriented to the world outside "Rovere" and regarded himself as an integral part of that world.

Merton (1957, p. 414) described the monomorphic influential as exerting influence only in a narrowly defined area while the polymorphic influential exerted influence in a variety of spheres. However, Merton made the following generalizations concerning opinion leaders:

1. People in each influence stratum are more likely to be influenced by their peers in this structure than are people in another strata.

2. Despite the great concentration of interpersonal influence among a relatively few individuals, the bulk of such influence is widely dispersed among the large number of people in the lower reaches of a structure.

3. People in each influence stratum are more likely to regard as influential people who are in the stratum immediately above their own than are informants in another strata, either above or below.

The "Decatur" study conducted by Katz and Lazarfield (1955, p. 138) attempted to go a step further than the "Rovere" study and investigate the advisor-advisee dyad. Thus, the study focused not only on opinion leaders but on the relative importance of personal influence and on the person who named the opinion leader as well as the leader. The respondents in the study were questioned not only about themselves and their own behavior but about other people as well . . . people who influenced them and people for whom they were influential. The purpose of the study was to confirm the personal influence exerted by those people named as opinion leaders. In two-thirds of the cases, those interviewed acknowledged contact between influentials and the influenced. In 77 percent of the confirmed cases, the roles played by the designatees were acknowledged by them to be the same as was alleged by the respondents who designated them. The results of the study also indicated that people are most likely to choose their experts mainly from within their own social group and their general influentials from persons from a higher social strata.

The research and related literature have established that personal influence plays an important role in the diffusion of information and supports rather conclusively that a "two-step flow" of information is a reality. A concommitant inference is that opinion leaders exist and perform a specialized function in the diffusion of information from its source to the remainder of the population.

Past research and literature also provides additional insight into the personal and social characteristics of these key individuals. Stewart (1947b, pp. 273-286) reported the results of a study of influentials in an area of New York City. His study indicated that the important opinion leaders of "Southtown" were characterized by high socioeconomic status, a sense of belonging to the community, and a favoring personality, of which an inclination toward service to the community was an important component.

Lionberger (1953, p. 327) conducted an intensive field investigation to determine whether farm operators who were sought as sources of farm information in a northwest Missouri community possessed characteristics which distinguished them from other farm operators in the community. Analysis of the data revealed that those most frequently sought as soucres of advice and information did possess such characteristics and that many of these characteristics were functionally related to the diffusion and use of farm information. These distinctive characteristics were:

1. They operated larger farms and had higher incomes than their associates;

2. They were accorded higher prestige ratings than farmers who were not sought as personal sources of farm information;

3. They were more active in all types of formal social organizations and were more likely to be members of groups dedicated to civic and educational improvement than people less in demand as sources of farm information;

4. They were much more broadly oriented, socially, than other farmers;

5. They were characterized by a higher order of technological competence as farmers, thereby rendering them eminently qualified to act as farm advisors.

Rogers (1962b, pp. 233-243) made the following generalizations about the characteristics of opinion leaders:

1. Opinion leaders conform more closely to social system norms than the average member.

2. There is little overlapping among the different types of opinion leaders.

3. Opinion leaders use more impersonal, technically accurate, and cosmopolite sources of information than do their followers.

4. Opinion leaders are more cosmopolite than their followers.

5. Opinion leaders have more social participation than their followers.

6. Opinion leaders have higher social status than their followers.

7. Opinion leaders are more innovative than their followers.

In a study of teachers of vocational agriculture in Ohio, Christiansen (1965, p. 128) hypothesized that the more innovative the experienced teacher is, with the exception of the innovator, the greater is the degree of opinion leadership which he is likely to hold. Christiansen reported that innovators exerted more opinion leadership than was hypothesized. They were elected to the largest number of offices in community, district or county, and state organizations. The less localite the organization, the greater the number of positions of leadership innovators held in these organizations.

In reviewing the research and literature related to the identification of opinion leaders it was determined that there are three primary techniques of measuring opinion leadership. They are the sociometric, self-designating and key informant techniques.

The sociometric technique consists of asking group members to whom they go for advice and information about a specific idea. Certain patterns can then be developed and analyzed on the basis of the responses. The technique has been used quite extensively by researchers over the past few years in a wide variety of situations.

The literature is not consistent, however, as to the number of times a person must be mentioned in order to be considered as an opinion leader. In a study of a presidential election, (Lazarfield, *et al*, 1948) an advice giver was considered as an opinion leader if he influenced one other person. Wilkening (1952, p. 272) defined opinion leaders as persons named as sources of information by two or more persons. Marsh and Coleman (1954, p. 180) required two or more mentions while Rogers and Burdge (1962, p. 3) defined opinion leaders as those individuals named by three or more individuals. Merton (1957, p. 380) required four mentions and Lionberger (1953, pp. 327-338) required five mentions for an individual to be considered as an opinion leader.

Lindzey and Borgatta (1954, p. 407) define sociometric measure as a means for assessing the attractions or attractions and repulsions within a given group. It usually involves each member of the group privately specifying a number of other persons in the group with whom he would like to engage in some particular activity and, further, a number of persons with whom he would not like to participate in the activity.

Lindzey and Borgatta (1954, p. 422) list the following generalizations concerning the reliability of sociometric measures:

1. Most investigators report a relatively high degree of consistency in the sociometric pattern or sociogram over time, even though individual choices and rejections may fluctuate considerably.
2. With somewhat better quantitative evidence, one might apply the same generalization to indices or scores derived from sociometric data.
3. The reliability of the instrument seems somewhat greater when it is used with adults than when it is used with children.
4. There is some evidence that the least important or salient choices show the largest amount of change or unreliability.
5. The stability of sociometric choices appears to increase with the passage of time during which the group has been in exsistence.

Lionberger (1960, p. 109) in discussing the major achievements of research studies in the adoption of new ideas and practices states that by application of pseudo-sociometric techniques to the study of interpersonal relations, it has been possible to determine how social groups and status factors structure interpersonal patterns of communication and influence, to locate people who are sufficiently distinctive in the performance of functions involved in the diffusion of farm practices to be treated as special functionnaires, and to determine their distinctive characteristics. Those distinguished include persons who are instrumental in introducing new ideas and practices locally, those especially involved in the communication of information, and those distinctively influential in final decisions to adopt new ideas and practices.

The key informant technique of identifying opinion leaders consists of asking persons likely to know who the opinion leaders are to designate the opinion leaders. The key informant technique is usually cost-saving and time-saving when compared to the sociometric technique. However, Rogers (1962a, p. 229) indicates that the key informant technique suffers from lack of applicability to sample designs where only a portion of the audience is interviewed.

The self-designating technique consists of asking a respondent a series of questions to determine the degree to which he perceives himself to be an opinion leader. This method is dependent upon the accuracy with which respondents can identify and report their self-images. The advantage of the self-designating technique is that it measures the individuals perception of his opinion leadership, which is what actually affects his behavior (Rogers, 1962a, p. 229).

Rogers and Cartano (1962, p. 441) in discussing the self-designating technique indicated that a serious weakness in previous uses of this technique had been the small number of items included in the opinion leadership scale. Previous uses of this technique included only two questions. However, a modification of the two items plus an additional four questions resulted in an opinion leadership scale which yielded a split-half reliability of .703 (Rogers, 1962, p. 231). Rogers and Cartano (1962, p. 441) reported that the available evidence indicates the six-item self-designating opinion leadership scale is reliable, valid and unidimensional.

In conclusion, the following generalizations were drawn from the review of research and literature related to the identification of opinion leaders and their personal and social characteristics.

1. The sociometric technique has been used most often by researchers to identify opinion leaders. The key-informant technique correlates highest with the sociometric technique, followed by the self-designating techniques of identifying opinion leaders.

2. Opinion leaders:

    a. held a particular interest and competence in the sphere of discussion for which they led;

    b. had greater personal interaction through greater social participation;

    c. were more innovative than the individuals upon whom they exerted personal influence;

    d. were more cosmopolite than the individuals upon whom they exerted personal influence;

    e. conformed more closely to the social system norms than other individuals in the social system;

    f. used more impersonal, technically accurate, and cosmopolite sources of information than other individuals in the social system;

    g. were accorded higher social status than the individuals upon whom they exerted personal influence;

    h. were older than the individuals upon whom they exerted personal influence;

    i. had achieved a higher educational level than the individuals upon whom they exerted personal influence;

    j. had higher incomes than the individuals upon whom they exerted personal influence;

    k. may have been monomorphic or polymorphic in their spheres of influence;

    l. held a disproportionate number of elected and appointed offices in formal organizations than did the individuals upon whom they exerted personal influence;

    m. were characterized by a sense of belonging to the community and were inclined toward service to the community.

n. were exposed to the mass media to a greater extent than those upon whom they exerted personal influence.

III

METHODS AND PROCEDURES

The vocational agriculture teachers of South Carolina served as the sample for this study. The data were gathered from group interviews at regularly scheduled district meetings of these teachers in March 1968. The questionnaire has been included as Appendix A of this report. Followup information was gathered from individual teachers wherever necessary in March and April 1968.

Tests of significance involving the standard *z* score, chi-square and Spearman correlations were calculated.

Generally, the study was divided into two major sections: 1) an analysis of three techniques for identifying opinion leaders and 2) a comparison of the personal and social characteristics of teachers identified as opinion leaders as opposed to their peers.

IDENTIFICATION OF OPINION LEADERS

Three measures of opinion leadership were tested in the study: 1) sociometric choices; 2) a self-designating opinion leadership scale, and 3) key informant ratings.

The self-designating and key informant techniques of identifying opinion leaders were correlated with the sociometric technique to determine whether these methods were effective in identifying opinion leaders.

SOCIOMETRIC TECHNIQUE

The sociometric technique for identifying opinion leaders consisted of asking each vocational agriculture teacher to identify other teachers of vocational agriculture in the state from whom they would seek advice and information before they would make a major change in their program. The teachers were asked to name individuals they would seek in 11 program categories which included: 1) plant science, 2) animal science, 3) Future Farmers of America, 4) supervised work experience, 5) agricultural mechanics, 6) farm management, 7) specialized programs in horticulture, 8) specialized programs in agricultural supply, 9) young farmers, 10) adult farmers, and 11) administering a vocational agriculture department.

Sociometric scores were computed by totaling the number of times an individual was named by his peers in each of the 11 program areas. Those teachers named four or more times were then classified as opinion leaders. Since the researchers were interested in individuals who influenced a large number of other teachers and since the literature seemed inconsistent concerning the number of times a person must be named to be considered as an opinion leader, the researchers selected four mentions as the most reasonable alternative for the purposes of this study.

SELF-DESIGNATING TECHNIQUE

The self-designating technique consisted of a six-item scale which was included in the questionnaire (Appendix A, Section D, II). It was possible for teachers to score from 0-6 points on the scale. Those teachers scoring 4-6 points were categorized as considering themselves to be opinion leaders.

KEY INFORMANT TECHNIQUE

The key informant technique consisted of asking individuals who were familiar with all respondents to rate each teacher on the degree of opinion leadership exhibited in a specialized area of the vocational agriculture program. District supervisors of vocational agriculture programs were utilized for this task. Individual supervisors were asked to rate only teachers employed in their respective district. Also to attempt a rating of all teachers in a district in 11 areas of the vocational agriculture program would have been a time-consuming, tedious task. To eliminate this problem, six areas of the program were randomly selected and randomly assigned to district supervisors for the purpose of rating teachers on opinion leadership. By using this procedure, district supervisors rated only those teachers they knew best and in only one area of the vocational agriculture program. This procedure, while not encompassing all areas of the program, did provide a means for determining the effectiveness of the key informant technique. The instrument used to identify opinion leaders utilizing the key informant technique is included as Appendix B.

PERSONAL AND SOCIAL CHARACTERISTICS

A number of personal and social characteristics were analyzed in the second phase of the study. A list of these characteristics can be found in Chapter II of this publication. Social participation was measured by utilizing the Chapin Participation Scale (Miller, 1964, p. 209). Job satisfaction was measured by the Brayfield and Rothe Index of Job Satisfaction (Miller, 1964, p. 189). A measure of innovativeness was determined through the use of an adoption scale which was designed for teachers of vocational agriculture in South Carolina. The mathematical formula for the innovativeness scale (Christiansen, 1965, p. 50) was:

$$Is = \frac{tla + tlp}{Na} \cdot \frac{41}{Ye}$$

Where:

tla : time lag expressed in years for all practices adopted by the individual teacher.

tlp : time lag penalty in years for remaining practices adopted which could have been adopted.

Na : number of practices actually adopted.

41 : maximum length of experience of any teacher investigated.

Ye : years of experience of the individual teacher.

In determining the deviation-from-norms scores for teachers of vocational agriculture, the following formula was used:

$$\text{Deviancy score} = \frac{X_1 - X_2}{s}$$

Where:

X_1 : each respondent's innovativeness score.

X_2 : state norm on innovativeness.

s : standard deviation of innovativeness scores in the state.

IV

RESULTS

Usable data were obtained from 272 of the 279 vocational agriculture teachers in South Carolina, a 97.49 percent return. The analysis of the data is presented in this chapter.

IDENTIFICATION OF OPINION LEADERS

SOCIOMETRIC CHOICES

Figures 1 through 11 (pages 24-34) represent the choice patterns which resulted for each of the sociometric questions in section D-I of the questionnaire. A total score was computed for each teacher on the basis of the number of times he was identified as a source of information. Lines of leader-follower influence could be traced when both the sociometric "seeker" and "sought" were among the respondents.

In Figure 1 the choice patterns indicated that six opinion leaders were identified in the area of plant science. Two of these opinion leaders choose other opinion leaders as their source of advice and information. These six teachers influenced, directly or indirectly, 63 or 34 percent of all teachers in the state making a choice in this area. The lines of influence crossed supervisory district boundaries as teachers in one district named teachers in other districts as their opinion leaders. Personal influence was widely distributed as a total of 75 teachers received mention as sources of advice and information in the area of plant science.

The choice patterns presented in Figure 2 represent the choices made by teachers in the area of animal science. A total of 10 opinion leaders were identified in the area. These 10 individuals influenced, directly or indirectly, 122 or 70 percent of the teachers expressing a choice. It was evident that one teacher possessed a disproportionate degree of opinion leadership in this area. Teacher B, directly or indirectly, influenced 44 other teachers or 25 percent of the teachers making a choice in the area of animal science. District lines again were no barrier to the flow of influence as opinion leader B chose opinion leader F who was located in another area of the state.

The Future Farmers of America (FFA) area presented a wide variation in choice patterns as was observed by inspection of Figure 3. Sixteen opinion leaders were established by peer choice. In addition, the "chains" of influence were greatly extended compared to "chains" in other areas. Opinion leaders

20/

A, B, F, G, J, K and L were included in the "chain" involving 64 teachers in four of the six supervisory districts. Opinion leaders C, D and H were also involved in an influence chain involving 30 teachers in three supervisory districts. Personal influence was confined to a relatively small number of individuals as only 66 individuals were selected as sources of advice and information in the FFA area of the vocational agriculture program.

The supervised work experience area choice patterns are represented by Figure 4. Although 11 opinion leaders were identified, only 117 individual teachers made choices in this area. The 11 opinion leaders influenced, directly or indirectly, 85 or 72 percent of all teachers expressing a choice in the area. No long "chains" of influence were evident in this area as opinion leader groupings were isolated.

Choice patterns in the area of agricultural mechanics are represented by Figure 5. Thirteen opinion leaders were identified in this area. These opinion leaders influenced, directly or indirectly, 75 percent of all teachers expressing a choice in the area. Chains of influence became evident as opinion leaders A, B, C and E were involved in a chain composed of 49 teachers in two supervisory districts and G, I and L were linked in an influence network composed of 54 teachers. Opinion leaders D and F, and J and K were linked into two smaller networks composed of 33 and 18 teachers respectively. The number of isolated choices was limited as only 13 teachers were not linked to larger groups.

Farm management choice patterns are presented in Figure 6. Five opinion leaders were identified in this area. These opinion leaders influenced, directly or indirectly, only 28 percent of the teachers expressing a choice in the area. Chains of influence were evident but somewhat limited. Opinion leaders A and B were linked into a network involving 16 teachers, while opinion leaders C and E were linked into a network involving 11 teachers. The number of isolated choices was high.

Figure 7 represents the choice patterns of teachers in the area of specialized programs in ornamental horticulture. Chains of influence and networks were evident in this area. Thirteen leaders were identified in the area with one, M, not being linked into a network. Opinion leaders A, D, G, H and J were linked into a network involving 104 teachers. Opinion leaders E, F, I, K and L were involved in a network linking 60 teachers. All six of the supervisory districts were represented in these networks. Districts 1, 2, 3 and 4 in the first network and Districts 4, 5 and 6 in the latter network. The 13 opinion leaders influenced 90 percent of the teachers expressing a choice in the area of specialized program in ornamental horticulture.

Choice patterns in the area of specialized programs in agricultural supply are represented by Figure 8. Only three opinion leaders were identified in the area, of which only two influenced a relatively large number of individual teachers. Opinion leader A influenced 11 teachers and opinion leader B influenced 13 teachers. Ninety-one teachers expressed a choice in the area. However, the three opinion leaders influenced 31 percent of the teachers expressing a choice in the area of specialized programs in agricultural supply. Interconnected chains and networks of influence were absent.

Young farmer program choice patterns are represented by Figure 9. Twelve opinion leaders were identified in the area. These 12 opinion leaders influenced, directly or indirectly, 71 percent of all teachers expressing a choice in the young farmer program area. Chains of influence and networks became evident even though the chains were not extended in length. Opinion leaders B and D and C and E were involved in the two major networks of influence.

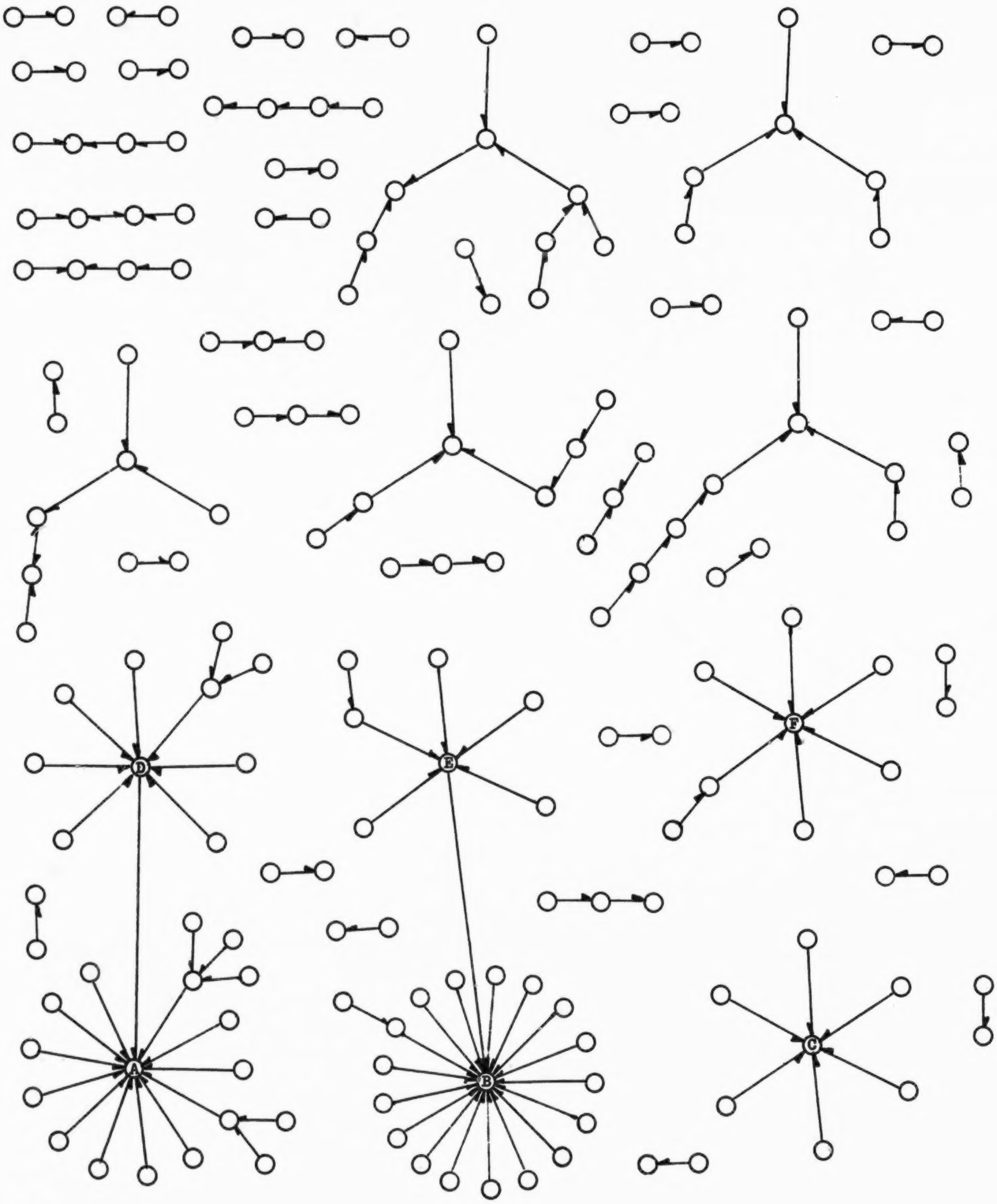
Figure 10 presents the choice patterns of vocational agriculture teachers in the area of adult farmer programs. Seven opinion leaders were identified. The opinion leaders influenced 50 percent of the teachers expressing a choice in the area. The single extended chain of influence involved opinion leaders C and F. Opinion leader C chose an individual who in turn chose opinion leader F. Opinion leader F chose an individual who in turn chose opinion leader C. This network involved 24 teachers and extended across supervisory district boundaries.

Choice patterns of teachers in the area of administering a vocational agriculture department are presented in Figure 11. Nine opinion leaders were identified in this area. These opinion leaders influenced 62 percent of the teachers expressing a choice in the area. Opinion leader B influenced 32 or 21 percent of the total number of teachers expressing a choice. Opinion leaders C and E were involved in the only extended chain of influence. This extended network involved 21 teachers of vocational agriculture. The teachers involved in this network all represented a single supervisory district.

In summarizing Figures 1-11, the number of opinion leaders identified varied from one area of the program to another ranging from a low of three in the area of specialized programs in agricultural supply to a high of 16 in the Future Farmers of America area. Extended chains and networks of influence were apparent in some areas and not evident in other areas. To some degree it was evident that opinion leaders chose other opinion leaders as their source of advice and information. From the peer choice patterns presented in these figures, opinion leaders did exist in all areas of the vocational agriculture program as determined by the criterion of having been mentioned a minimum of four times by fellow teachers of vocational agriculture.

FIGURE 1

SOURCES OF ADVICE AND INFORMATION IN PLANT SCIENCE BY PEER
CHOICE PATTERNS OF VOCATIONAL AGRICULTURE TEACHERS IN SOUTH CAROLINA IN 1968

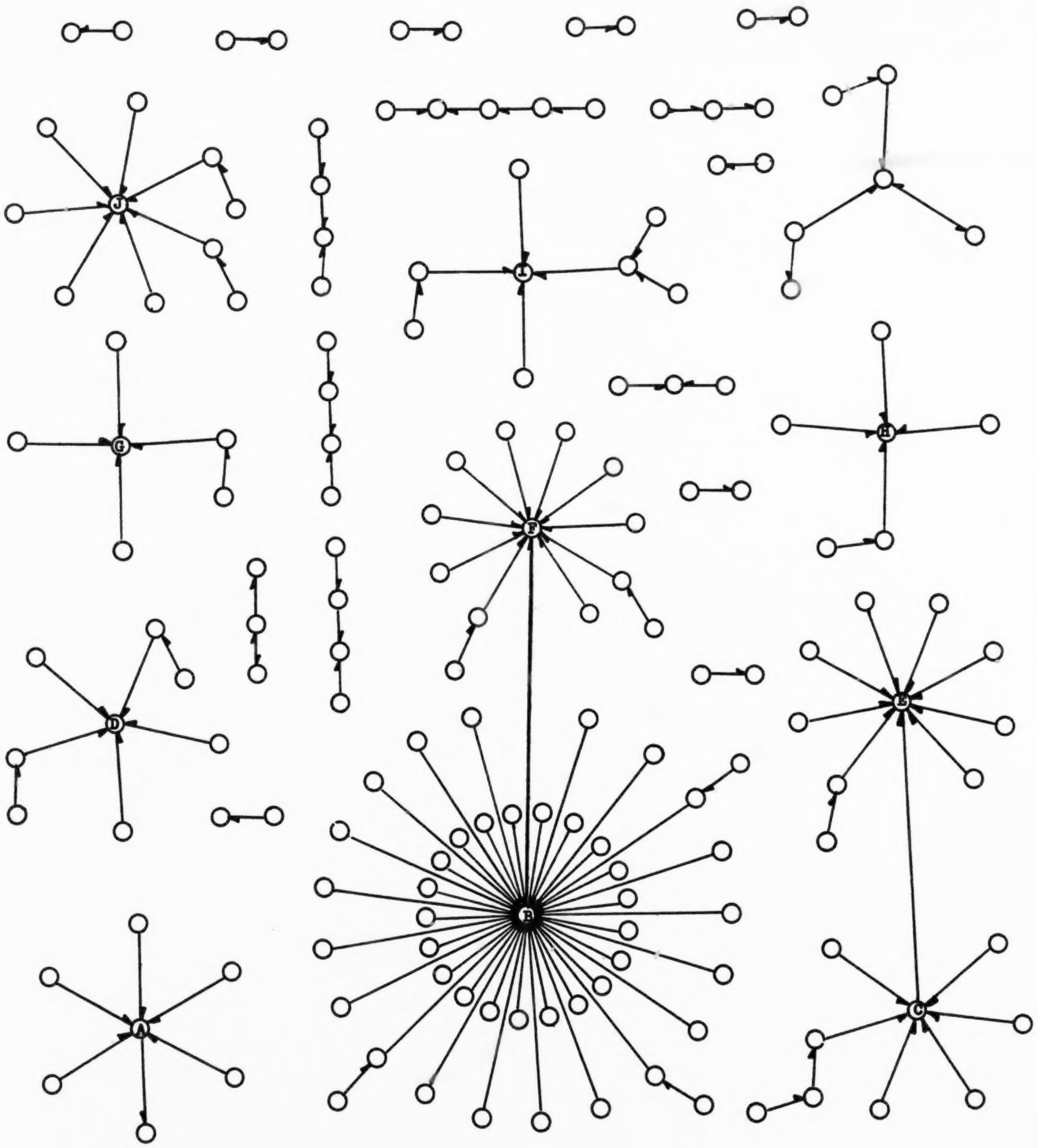


LEGEND:

——▸ = Direction of Choice
○ = Individual Teacher
Ⓐ = Opinion Leader

FIGURE 2

SOURCES OF ADVICE AND INFORMATION IN ANIMAL SCIENCE BY PEER CHOICE PATTERNS OF VOCATIONAL AGRICULTURE TEACHERS IN SOUTH CAROLINA IN 1968

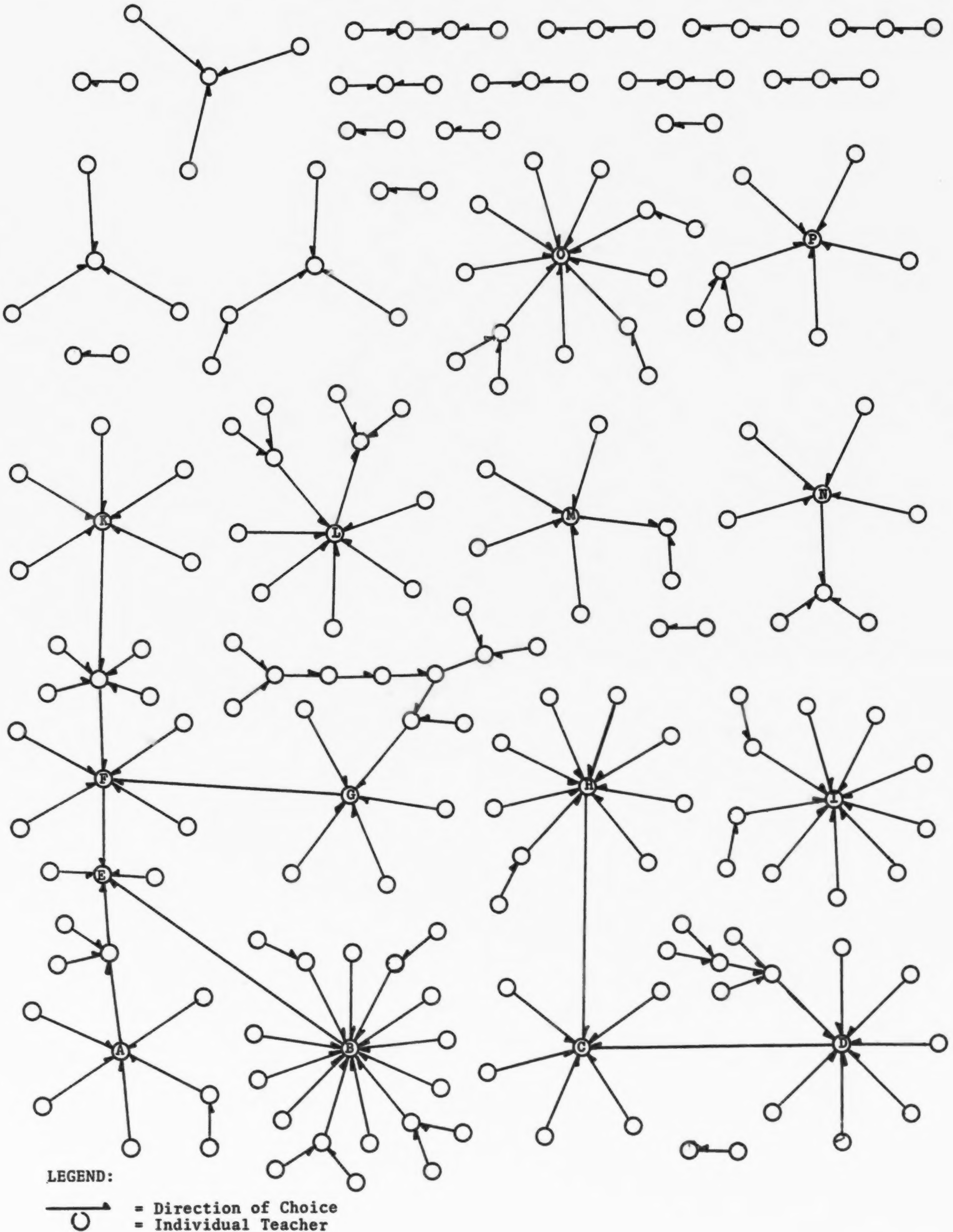


LEGEND:

→ = Direction of Choice
○ = Individual Teacher
Ⓐ = Opinion Leader

FIGURE 3

SOURCES OF ADVICE AND INFORMATION IN FFA BY PEER
CHOICE PATTERNS OF VOCATIONAL AGRICULTURE TEACHERS IN SOUTH CAROLINA IN 1968

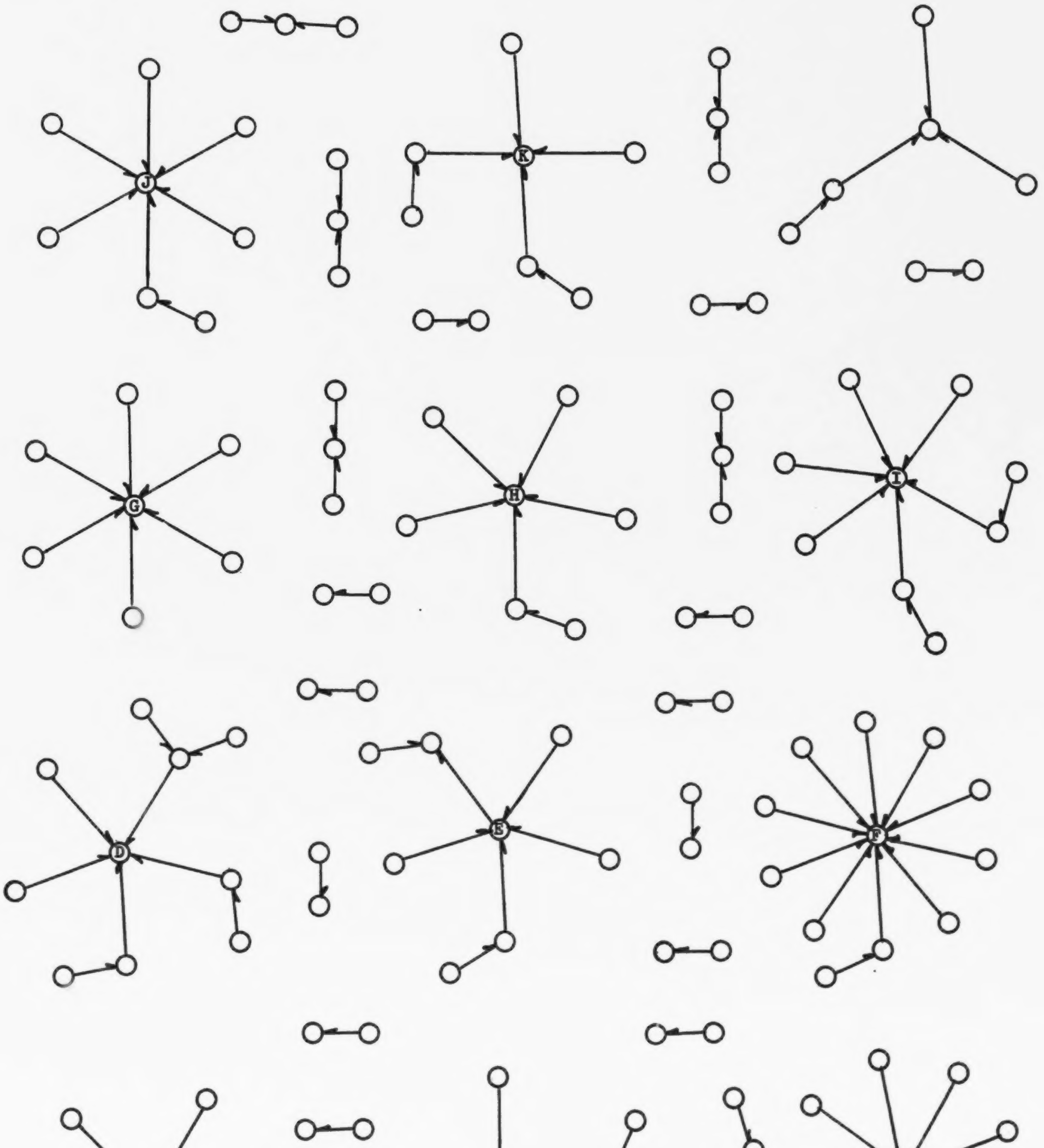


LEGEND:

→ = Direction of Choice
○ = Individual Teacher
Ⓐ = Opinion Leader

FIGURE 4

SOURCES OF ADVICE AND INFORMATION IN WORK EXPERIENCE BY PEER CHOICE PATTERNS OF VOCATIONAL AGRICULTURE TEACHERS IN SOUTH CAROLINA IN 1968

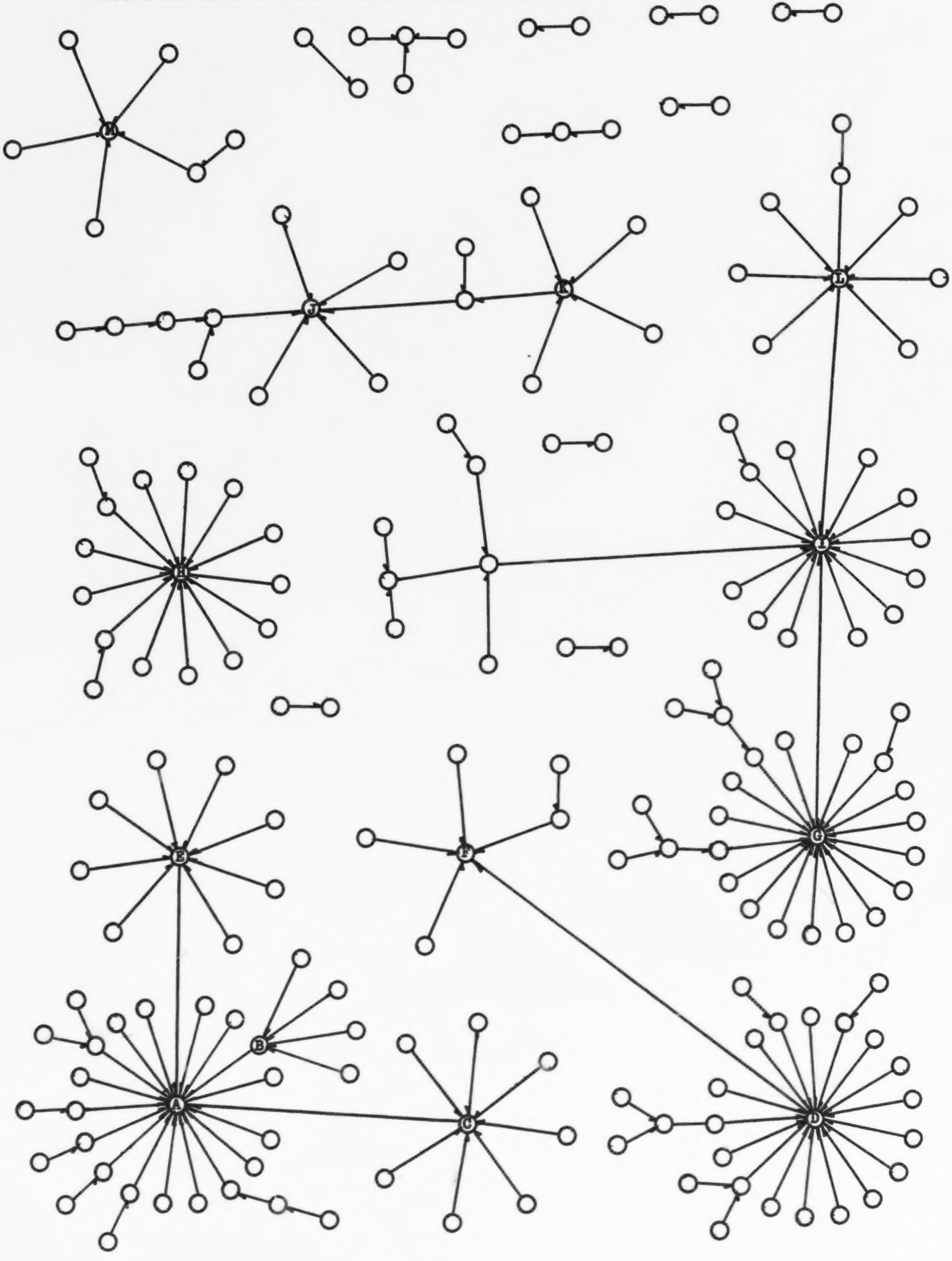


LEGEND:

→ = Direction of Choice
○ = Individual Teacher
Ⓐ = Opinion Leader

FIGURE 5

SOURCES OF ADVICE AND INFORMATION IN FARM MECHANICS BY PEER CHOICE PATTERNS OF VOCATIONAL AGRICULTURE TEACHERS IN SOUTH CAROLINA IN 1968



LEGEND:

→ = Direction of Choice
○ = Individual Teacher
Ⓐ = Opinion Leader

FIGURE 6

SOURCES OF ADVICE AND INFORMATION IN FARM MANAGEMENT BY PEER CHOICE PATTERNS OF VOCATIONAL AGRICULTURE TEACHERS IN SOUTH CAROLINA IN 1968

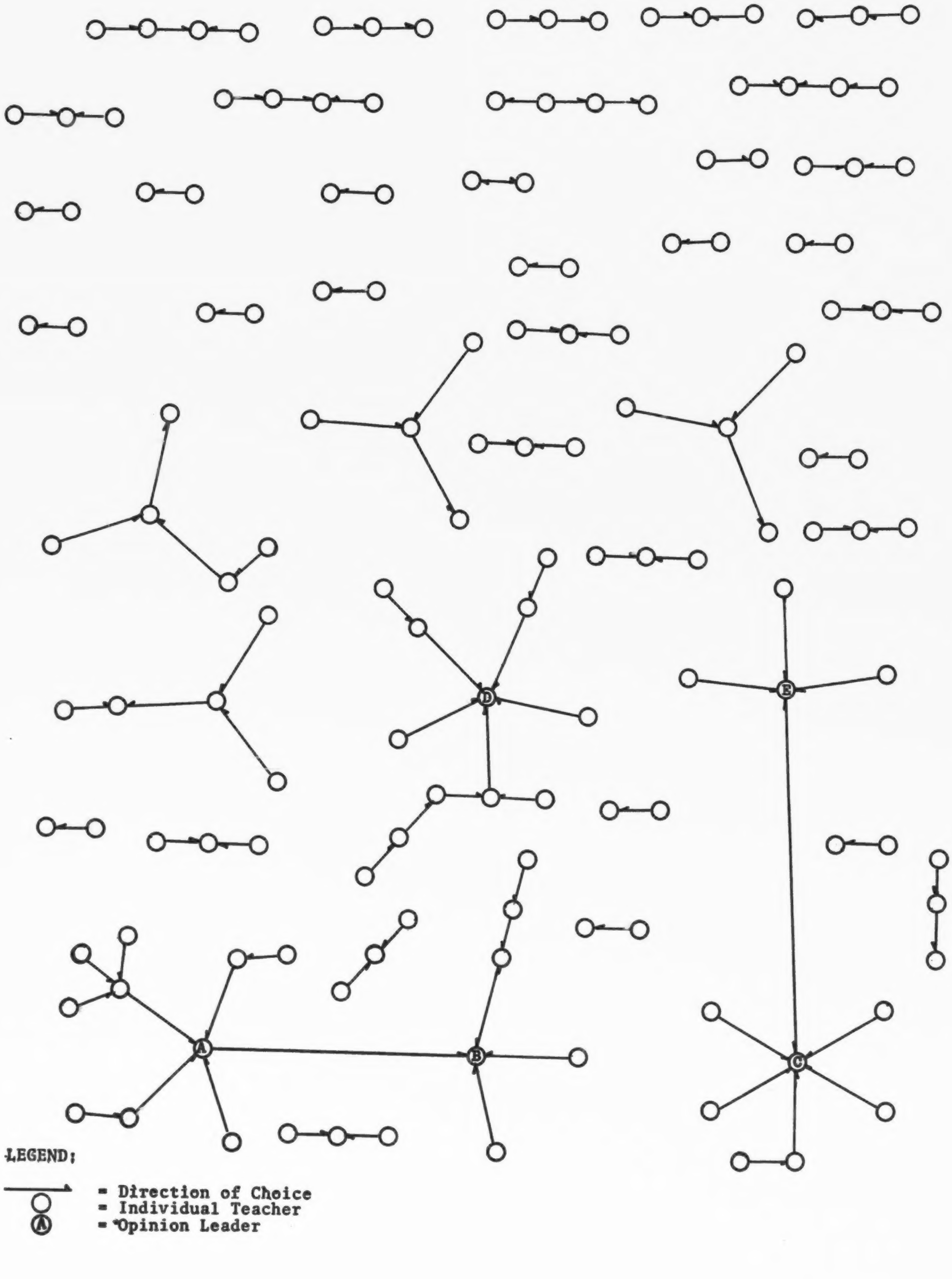
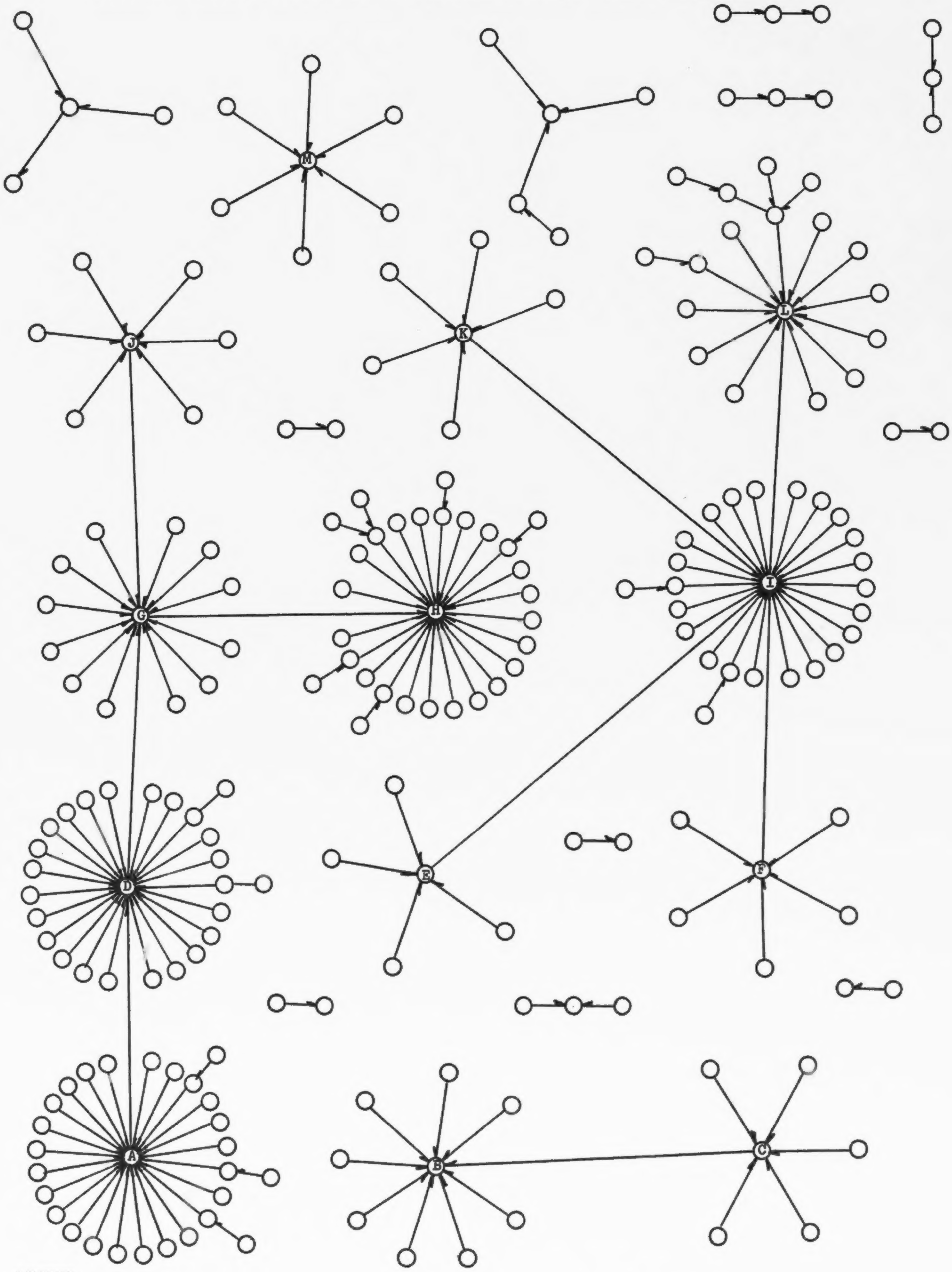

A
B
C
D
E
LEGEND;
= Direction of Choice
= Individual Teacher
A
= Opinion Leader

FIGURE 7

SOURCES OF ADVICE AND INFORMATION IN ORNAMENTAL HORTICULTURE BY PEER CHOICE PATTERNS OF VOCATIONAL AGRICULTURE TEACHERS IN SOUTH CAROLINA IN 1968

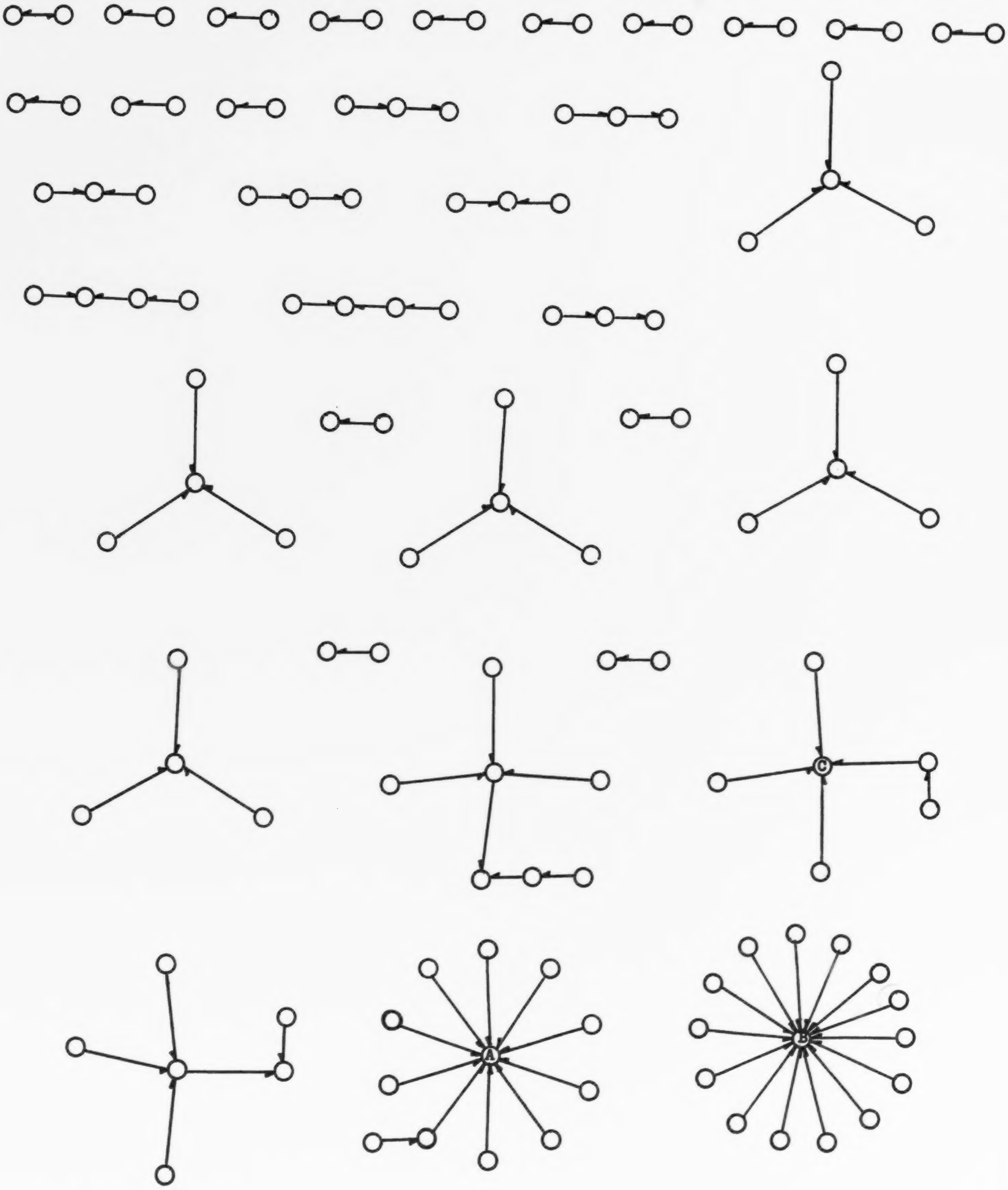


LEGEND:

→ = Direction of Choice
○ = Individual Teacher
Ⓐ = Opinion Leader

FIGURE 8

SOURCES OF ADVICE AND INFORMATION IN AGRICULTURAL SUPPLY BY PEER CHOICE PATTERNS OF VOCATIONAL AGRICULTURE TEACHERS IN SOUTH CAROLINA IN 1968

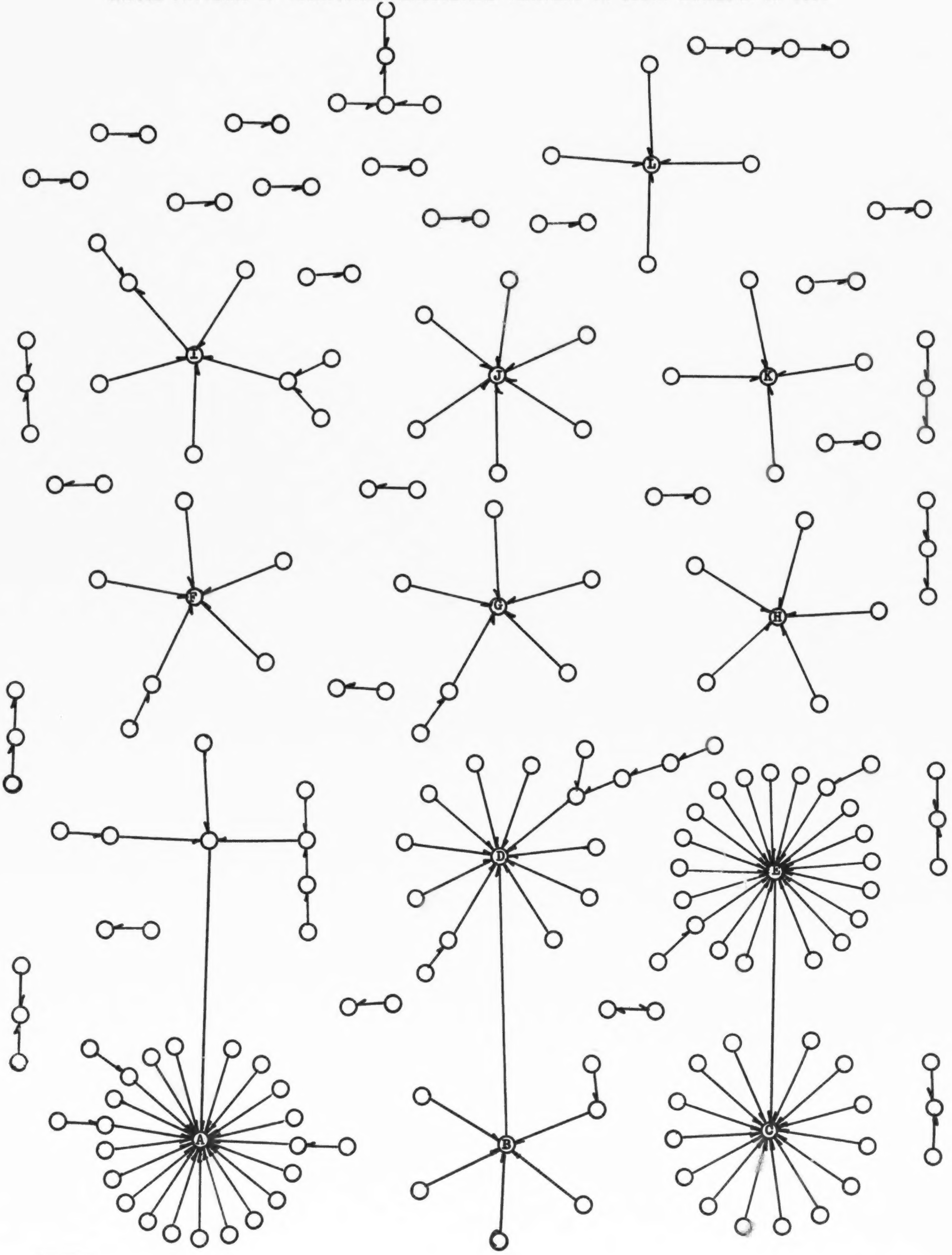


LEGEND:

→ = Direction of Choice
○ = Individual Teacher
Ⓐ = Opinion Leader

FIGURE 9

SOURCES OF ADVICE AND INFORMATION IN YOUNG FARMERS BY PEER CHOICE PATTERNS OF VOCATIONAL AGRICULTURE TEACHERS IN SOUTH CAROLINA IN 1968

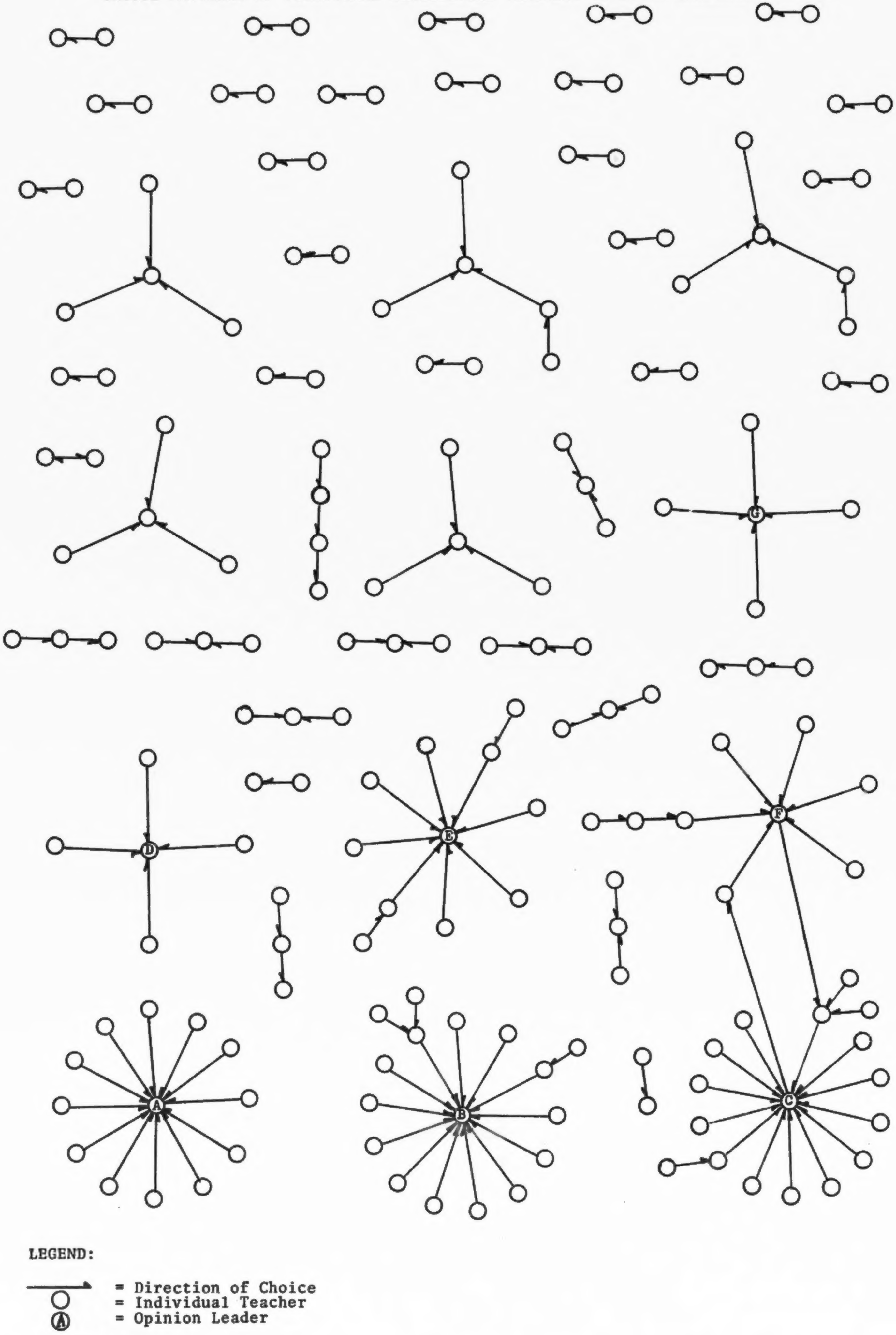


LEGEND:

→ = Direction of Choice
○ = Individual Teacher
Ⓐ = Opinion Leader

FIGURE 10

SOURCES OF ADVICE AND INFORMATION IN ADULT FARMERS BY PEER CHOICE PATTERNS OF VOCATIONAL AGRICULTURE TEACHERS IN SOUTH CAROLINA IN 1968

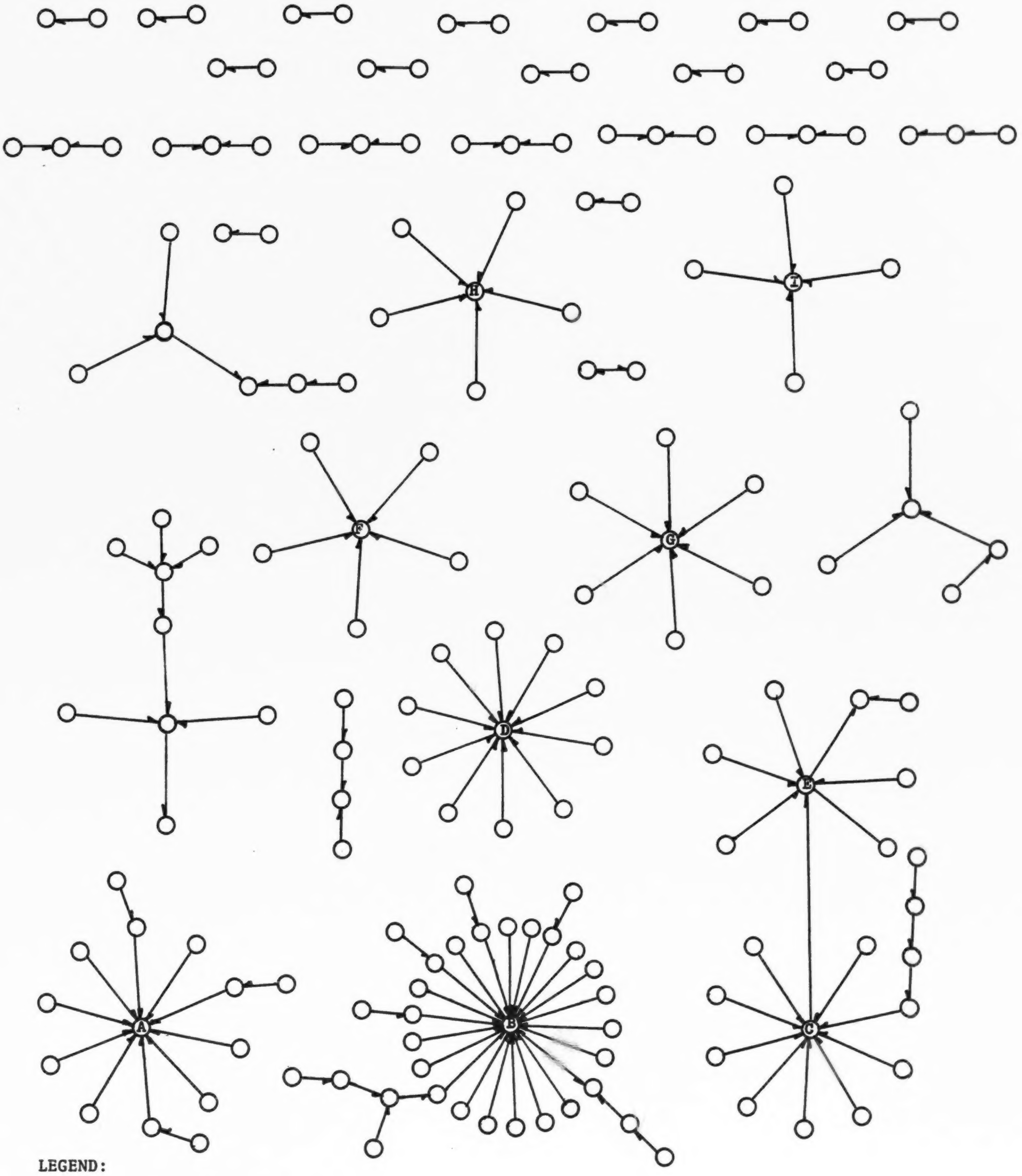


LEGEND:

⟶ = Direction of Choice
○ = Individual Teacher
Ⓐ = Opinion Leader

FIGURE 11

SOURCES OF ADVICE AND INFORMATION IN ADMINISTRATION OF A DEPARTMENT BY PEER CHOICE PATTERNS OF VOCATIONAL AGRICULTURE TEACHERS IN SOUTH CAROLINA IN 1968



LEGEND:

→ = Direction of Choice
○ = Individual Teacher
Ⓐ = Opinion Leader

SCOPE OF OPINION LEADERSHIP

A high degree of interrelationship was observed among the responses to the several questions that made up the total sociometric score. Merton (1957, p. 415) termed this type of opinion leadership as polymorphic, in that a single leader was sought for advice and information about a variety of topics. Of the 51 opinion leaders identified by the sociometric technique, 21, or 41 percent, were polymorphic opinion leaders. The data in Table 1 presents the distribution of monomorphic-polymorphic opinion leadership by specialized areas of vocational agriculture programs. The FFA area contained the largest number of opinion leaders with 16. Six of these opinion leaders were influential in only the area of FFA and are classified as monomorphic opinion leaders. Ten opinion leaders were polymorphic or influential in other areas in addition to FFA.

Three areas did not have monomorphic opinion leaders. These areas were specialized programs in agricultural supply, adult farmers and administering a vocational agriculture department. The area of agricultural mechanics contained nine monomorphic opinion leaders.

TABLE 1

DISTRIBUTION OF MONOMORPHIC-POLYMORPHIC OPINION LEADERSHIP BY AREA OF THE VOCATIONAL AGRICULTURE PROGRAM

Area of Program	Opinion Leaders Identified* Total	Monomorphic	Polymorphic
Plant Science	6	1	5
Animal Science	10	2	8
FFA	16	6	10
Supervised Work Experience	11	1	10
Agricultural Mechanics	13	9	4
Farm Management	5	1	4
Specialized Programs in Ornamental Horticulture	13	5	8
Specialized Programs in Agricultural Supply	3	0	3
Young Farmers	12	5	7
Adult Farmers	7	0	7
Administering a Vocational Agriculture Department	9	0	9

* A total of 51 opinion leaders were identified by the sociometric technique.

The data in Table 2 reveals the relative influence of polymorphic opinion leaders. Opinion leaders A and B were designated by their peers as opinion leaders in nine of the 11 areas of the vocational agriculture program. Opinion leaders C, D, E and F were opinion leaders in five areas of the program. Opinion leader G was influential in four areas of the program and opinion leaders H, I, J, K and L were designated as opinion leaders by their peers in three areas of the program. The remaining polymorphic opinion leaders were influential in two areas.

TABLE 2

AREAS OF THE VOCATIONAL AGRICULTURE PROGRAM IN WHICH POLYMORPHIC OPINION LEADERS WERE INFLUENTIAL

	Area of Vocational Agriculture Program										
Polymorphic Opinion Leader	Plant Science	Animal Science	FFA	Work Experience	Agricultural Mechanics	Farm Management	Ornamental Horticulture	Agricultural Supply	Young Farmer	Adult Farmer	Administering a Department
A	x	x	x	x		x		x	x	x	x
B	x	x	x	x	x		x		x	x	x
C			x	x		x			x		x
D			x	x					x	x	x
E		x	x						x	x	x
F		x		x				x	x	x	
G			x	x			x				x
H		x			x		x				
I			x	x		x					
J					x		x				x
K		x								x	x
L						x			x	x	
M				x			x				
N	x						x				
O		x	x								
P				x				x			
Q		x	x								
R	x						x				
S	x						x				
T			x								x
U				x	x						

OTHER SOURCES OF ADVICE AND INFORMATION

In addition to asking teachers to identify the individual to whom they would go for advice and information pertaining to specific areas of the vocational agriculture program, they were also requested to identify the general source from which they typically would seek advice and information when confronted with a specific problem. Teachers were asked to designate either other vocational agriculture teachers, other teachers, teacher educators, school administrators, professional literature or advisory groups. If none of the preceding adequately described their source, teachers were requested to write in the source from which they typically sought advice and information.

As indicated by the data in Table 3, the two major sources of advice and information for opinion leaders and their peers were other teachers of vocational agriculture programs. These sources were followed by school administrators and advisory groups or members of advisory groups. Teacher educators were not mentioned by any teacher as a source of advice and information and other teachers were named only three times.

TABLE 3

SOURCES MOST OFTEN SOUGHT FOR ADVICE AND INFORMATION BY OPINION LEADERS AND THEIR PEERS

Source	Group					
	Opinion Leaders		Peers		All Teachers	
	No.	Percent	No.	Percent	No.	Percent
Other Vo-Ag Teachers	16	31.4%	80	36.2%	96	35.3%
Other Teachers	0	0.0	3	1.4	3	1.2
District Supr.	21	41.2	66	29.8	87	31.9
Teacher Educator	0	0.0	0	0.0	0	0.0
School Adm.	4	7.8	34	15.4	38	13.9
Professional Literature	2	3.9	12	5.5	14	5.2
Advisory Group or Member of Advisory Group	8	15.7	24	10.8	32	11.7
Other*	0	0.0	2	.9	2	.8
Total	51	100.0%	221	100.0%	272	100.0%

* One teacher indicated that it depended upon the situation and one other indicated lay persons other than advisory group members.

The district supervisor was named frequently as a source of advice and information. He generally was considered a specialist and aware of the problems which existed. Opinion leaders evidently made greater use of this source of advice and information than did their peers. Generally these data indicated that other vocational agriculture teachers were the major sources of advice and information for teachers of vocational agriculture. In addition, other sources also influence the teacher of vocational agriculture in varying degrees.

SELF-DESIGNATING OPINION LEADERSHIP SCALE

One of the major objectives of the study was to establish the most effective method for the identification of opinion leaders.

The self-designating opinion leadership scale used in the study was a version of the scale developed by Rogers (1962a, pp. 230-231). The data in Table 4 presents the average score of teachers on the self-designating opinion leadership scale. The standard z score computation indicated that the scores of opinion leaders and other teachers were not significantly different as measured by the self-designation scale.

TABLE 4

SELF-PERCEPTION OF OPINION LEADERS BY OPINION LEADERS AND THEIR PEERS

Group	N	Mean Score	Standard Deviation
Opinion Leaders	31	4.05	1.36
Peers	218	3.91	1.57
Difference		.14*	

* Z = .64, not significant at the .05 level.

Correlations of sociometric choices with the self-designating technique of identifying opinion leaders were also computed. The sociometric score used was the total sociometric score received by an individual teacher in all areas of the vocational agriculture program. This total score was used because the self-designating scale presented an overall indication of opinion leadership rather than an indication of opinion leadership in a specific area. No significant correlation between sociometric choice and self-designating opinion leadership scale scores was found in any of the six supervisory districts.

It was concluded that the scores of teachers on the self-designating opinion leadership scale did not discriminate between opinion leaders and their peers. The lack of discrimination was probably caused by the tendency of all teachers to rate themselves high on the self-designating opinion leadership scale.

KEY INFORMANT TECHNIQUE

The key informant technique (rating by judges) was the next test used to identify opinion leaders. It was hypothesized that there was no significant correlation between the sociometric and the key informant techniques of identifying opinion leaders.

To measure opinion leadership accurately, each informant (judge) had to be thoroughly familiar with the vocational agriculture programs, including the individual teachers of vocational agriculture. Therefore, the judges used in the study were the district supervisors of agricultural education. The shortest period of time that any supervisor had served in that capacity was four years, while the longest period of time was 20 years.

Spearman correlations between sociometric choice and judges' ratings were computed. The sociometric score utilized in developing the correlations was the number of times an individual was named in a specific area of the vocational agriculture program. In Table 5, the sociometric scores are ranked and correlated with the judge's ranking of individuals in that specific area.

TABLE 5

SPEARMAN CORRELATIONS OF SOCIOMETRIC CHOICES WITH JUDGES' RATING TECHNIQUE OF IDENTIFYING OPINION LEADERS IN SIX AREAS OF THE VOCATIONAL AGRICULTURE PROGRAM

Measure of Opinion Leadership	Correlation With Sociometric Choices In Specific Areas of the Vocational Agriculture Program					
	Adult Farmer	Farm Mgm.	Ag. Mech.	Animal Science	FFA	Young Farmer
Judges' Rating Of Opinion Leadership Exhibited	.674*	.516*	.516*	.303*	.271	.382*

* Significant at the .05 level

The key informant of judges rating, in all cases except one, correlated significantly and positively with the sociometric choice technique. The one area in which the correlation was not significant, Future Farmers of America, did approach significance at the .05 level. On the basis of the data it could be concluded that district supervisors of vocational agriculture were able to identify the opinion leaders in the specific areas of the vocational agriculture program.

PERSONAL AND SOCIAL CHARACTERISTICS OF OPINION LEADERS

The review of literature led the researchers to believe that opinion leaders could be identified through certain personal and social characteristics. A selected number of these characteristics were included in the study and the findings are presented on the next few pages. Tables 6, 7 and 8 summarize the data concerning the personal and social characteristics of opinion leaders and their peers.

TABLE 6

PERSONAL AND SOCIAL CHARACTERISTICS OF OPINION LEADERS AND THEIR PEERS AMONG TEACHERS OF VOCATIONAL AGRICULTURE IN SOUTH CAROLINA IN 1968

Characteristic	Average for Opinion Leaders	Average For Peers	Average for All Teachers
Age*	46.0	39.6	40.7
Years of Teaching Experience*	21.1	13.7	15.1
Number of Schools in which employed	1.9	1.8	1.8
Years in present job*	17.0	10.1	11.3
Credits earned since beginning to teach* (semester hours)	33.5	20.8	23.2
Personal money invested in professional growth	410.79	448.19	447.06
Salary	$8,758.41	$7,925.41	$8,086.06
Cosmopolitism			
Other vo-ag depts. visited	3.0	2.6	2.7
Other depts. of instruction visited	1.5	1.5	1.5
Professional educational meetings attended			
district	13.4	13.2	13.3
state	3.8	2.7	2.9
regional	.2	.1	.1
national	.7	.1	.2
Publications read			
Professional education	2.8	3.1	3.0
Technical agriculture	6.3	6.1	6.2
Social participation* (Chapin Scale)	81.2	59.1	63.2
Job satisfaction (Brayfield & Rothe Index)	71.5	69.9	70.2
Innovativeness* (Adoption Scale)	30.0	49.5	46.4
Deviance-from-norms on innovativeness	.664	.681	.678

* Difference significant at the .05 level

AGE OF TEACHERS

The youngest teacher of vocational agriculture in the state was 21 years of age, while the oldest teacher was 64 years of age. The age range of opinion leaders was 43 years, with the youngest opinion leader being 22 years of age and the oldest opinion leader being 64 years of age.

When the average age of the two groups was computed, opinion leaders averaged 46.0 years of age while peer group members averaged 39.6 years of age. The difference of 6.4 years was significant at the .05 level when a standard z score statistic was computed. Thus opinion leaders tended to be older. Only one teacher who was less than 30 years of age was named as an opinion leader.

TABLE 7

TYPES OF INFORMATION SOURCES USED BY OPINION LEADERS AND THEIR PEERS TO OBTAIN MOST OF THEIR TEACHING IDEAS

Type of Information Source	Group		
	Opinion Leader	Peers	Total*
Personal	62.7%	53.8%	55.5%
Impersonal	37.3	46.2	44.5
	100.0	100.0	100.0
Within Agriculture Education	84.3	87.7	87.1
Outside Agriculture Education	15.7	12.3	12.9
	100.0	100.0	100.0
Local	88.2	83.7	84.5
Non-Local	11.8	16.3	15.5
	100.0	100.0	100.0
Requiring Cash Outlay	47.0	54.2	52.9
Not Requiring Cash Outlay	53.0	45.8	47.1
	100.0	100.0	100.0
Requiring a Large Amount of Personal Time	54.9	69.6	66.9
Requiring a Small Amount of Personal Time	45.1	30.4	33.1
	100.0	100.0	100.0

* X^2 = 7.372 degrees of freedom = 9,
not significant at the .05 level

TABLE 8

ELECTIVE AND APPOINTIVE OFFICE HELD IN PROFESSIONAL EDUCATIONAL ORGANIZATIONS BY OPINION LEADERS AND THEIR PEERS

Group	Number of Offices Held				
	Local	County or District	State	National	Total
Opinion Leaders	4	18	21	5	48
Peers	27	51	26	1	105
Total*	31	69	47	6	153

* X^2 = 21.81, degrees of freedom = 3, significant at the .05 level

YEARS OF SERVICE

Opinion leaders had been teaching vocational agriculture an average of 21.1 years compared to an average of 13.7 years for their fellow teachers. The difference of 7.4 years of teaching experience was significant at the .05 level when a standard z score statistic was computed. Thus it was concluded that opinion leaders have more years of service in teaching vocational agriculture than do their peers.

TEACHING POSITIONS HELD

On the basis of the data collected there was no significant difference in the number of different vocational agriculture teaching positions held by teachers who were opinion leaders and teachers of vocational agriculture who were not identified as opinion leaders. However, there was a significant difference in the number of years that opinion leaders had taught in the school in which they were teaching when the data were collected. The data indicated that opinion leaders had taught in the schools in which they were presently teaching for an average of 17.0 years compared to an average of 10.1 years for their peers.

EDUCATIONAL ACHIEVEMENT

Data were collected from vocational agriculture teachers concerning the number of college credit hours completed since they began to teach and the level of formal education attained. Opinion leaders were found to have attained a significantly higher educational level than teachers of vocational agriculture who were not opinion leaders. Opinion leaders had completed an average of 33.5 semester hours of college credit since they began to teach vocational agriculture compared to an average of 20.8 semester hours completed by other teachers of vocational agriculture. The difference of 12.7 average hours was significant at the .05 level.

When the teachers were categorized as to the level of formal education attained, it was observed that 30 of the 51 opinion leaders had completed work at the master's plus level. Further, only two opinion leaders had not completed work above the bachelor's degree level. The differences in frequencies were significant at the .05 level and the chi-square statistic was applied to the data.

INVESTMENT IN PROFESSIONAL IMPROVEMENT

Teachers were asked to report the amount of their own money that they had invested in professional growth during the preceding two years. Items such as fees, registration costs, books, room and board, dues, magazine subscriptions, etc., were considered in determining the cost of professional improvement.

No significant difference was found in the personal investments in professional improvement between opinion leaders and their peers. Opinion leaders invested an average of $410.79 in professional growth during the preceding two years compared to an average of $448.19 invested by their nominators. Although the difference of 37.40 was not significant at the .05 level, it was interesting that opinion leaders had spent less money on professional growth than other teachers.

INCOME FROM TEACHING

The data collected pertaining to this hypothesis was not obtained directly from teachers of vocational agriculture but from state department of education files. It was assumed that this source would probably be more reliable than asking teachers to report their incomes. In addition, this also aided in making the instrument more impersonal to the individual teacher completing it.

Salaries of teachers who were opinion leaders averaged $833 per year more than teachers who were not opinion leaders. This difference was significant at the .05 level when the standard z statistic was computed. Caution must be used in interpreting these findings as teacher salaries were based on a state salary scale with local supplements. This scale rewarded years of experience and educational attainment beyond the bachelor's degree, in addition to being based on scores on the National Teachers Examination. In other words, the teacher's experience and educational attainment, plus his score on the National Teachers Examination could conceivably have more effect on salary than the degree of opinion leadership exhibited.

EDUCATIONAL OFFICES HELD

The largest number of offices held by opinion leaders was at the county or district and state levels. Peer group teachers held a disproportionately greater number of local offices and opinion leaders held a disproportionately greater number of state and national offices. The overall difference in frequencies was significant when the chi-square statistic was computed for the data.

On this basis, it was concluded that opinion leaders tended to hold a greater number of offices in educational organizations than did teachers of vocational agriculture who were not opinion leaders.

COSMOPOLITISM

The number of professional education meetings attended on the district, state, regional and national levels during the preceding two years, the number of other departments of vocational agriculture visited during the preceding year, and the number of other departments of instruction visited during the preceding year. were used as indicators of cosmopolitism. There was no significant difference in the cosmopolitism between the opinion leaders and their fellow teachers except that opinion leaders attended an average of 1.1 more state level professional education meetings.

SOURCES OF INFORMATION

When the chi-square statistic was computed for the data on sources of information no significant differences were found between the opinion leaders and their peers. Analysis of the data indicates that most vocational agriculture teachers, opinion leaders and their peers alike, used personal sources within the field of agricultural education which were local in nature and did require a cash outlay or a great amount of personal time. Differences were very noticeable between sources within and outside of agricultural education. Eighty-four percent of the opinion leaders and 87 percent of their peers used sources within the field of agricultural education for most of the ideas they used in teaching. Opinion leaders used sources of information requiring a small amount of personal time more often than did their peers, although this difference was not significant.

PUBLICATIONS READ

No significant differences were found between opinion leaders and their fellow teachers in the number of professional education and technical agriculture publications read. Opinion leaders regularly read 2.8 professional education publications which was .3 fewer than their peers. However, the opinion leaders read 1.8 additional publications on an infrequent basis compared to an average of 1.6 additional publications read infrequently by their peers. Both groups of teachers either subscribed to or received through their school affiliation an average of nearly three professional education publications. Approximately 75 percent of the teachers read the *American Vocational Journal* regularly, 71 percent read the *Agricultural Education Magazine* regularly and nearly 58 percent read the *NEA Journal* regularly. Very few other publications were read regularly by the teachers indicating that their reading in professional education publications was confined to vocational education and agricultural education.

Opinion leaders regularly read an average of 6.3 technical agriculture publications compared to 6.1 by their peers. The publications read most frequently by the teachers were *The Progressive Farmer* and *Doane's Agricultural Digest*. Approximately 81 percent of the teachers read these two publications on a regular basis. *The Farm Journal* was read frequently by almost 69 percent of the respondents.

SOCIAL PARTICIPATION

The teacher of vocational agriculture's degree of participation in community groups and institutions was measured by *Chapin Social Participation Scale*.

Opinion leaders scored an average of 81.2 points on the *Chapin Social Participation Scale* compared to an average of 59.1 points by their peers. The 22.1 points difference was significant at the .05 level when the standard *z* score statistic was computed for the data. It appears that opinion leaders had a significantly greater degree of social participation than did teachers of vocational agriculture who were not opinion leaders.

JOB SATISFACTION

No significant difference was found in the expression of job satisfaction of teachers who were opinion leaders and teachers who were not opinion leaders. No differences could be determined when a standard *z* score statistic was applied to the differences in mean scores of opinion leaders and their peers on the *Brayfield and Rothe Index of Job Satisfaction*. Anaylsis of the data indicated that opinion leaders may have been slightly more satisfied with their jobs but the difference of 1.6 score points was not significant at the .05 level.

INNOVATIVENESS

In order to test this factor, an adoption scale was administered to all teachers of vocational agriculture. Innovativeness scores were derived for opinion leaders and their peers. In addition, all teachers were classified, on the basis of their innovativeness scores, as innovators, early adopters, early majority, late majority and laggards.

Analysis of the data indicated that teachers of vocational agriculture who had been designated as opinion leaders were significantly more innovative than teachers who were not opinion leaders. Opinion leaders had an average score of 33.0 points while their peers had an average score of 49.5 on the innovative scale which was used. In interpreting these scores it should be remembered that lower scores represent greater innovativeness than higher scores. The difference of 16.5 score points was significant at the .05 level when the standard *z* score was computed for the data.

Opinion leaders were found to be more innovative than their peers. Four of the seven innovators were opinion leaders and nine of the 36 early adopters were opinion leaders. The largest concentration of opinion leaders was located in the early majority category, while the largest concentration of peer group members was located in the late majority category. When the chi-square statistic was applied to the data this difference in frequencies was significant at the .05 level.

CONFORMITY TO NORMS ON INNOVATIVENESS

A deviancy-from-norms score was computed by a ratio of the absolute difference between the respondent's innovativeness score and the community norm, to the range in all innovativeness scores in the community. Opinion leaders conformed much more closely to community norms that did followers. While opinion leaders were closer to social system norms, the difference was not significant.

On the basis of the data it was concluded that there was no significant difference in the conformity to social system norms on innovativeness by opinion leaders as compared to teachers who were not designated as opinion leaders.

In summary, opinion leaders differed significantly from their peers in seven characteristics. These characteristics were age, experience, educational achievement, salary, innovativeness, educational offices held, and the degree of social participation held. They did not differ significantly from their peers in the number of schools in which they had taught vocational agriculture, job satisfaction, money invested in professional growth, deviance from social system norms on innovativeness, cosmopolitism, sources of information and professional education and technical agriculture publications read.

V

CONCLUSION

The identification of opinion leaders may be the first step toward an understanding of the change process in vocational education. In attempting to create change and increase the adoption of approved educational innovations, the state supervisory staff should be able to identify opinion leaders. By identifying these opinion leaders and focusing their efforts on creating change in these individuals, supervisors could reap benefits from the interaction effect whereby individuals who have adopted an innovation may influence others to do so. In addition, those opinion leaders who are polymorphic, or influential in more than one area of the vocational agriculture program, multiply the effect of their personal influence.

The sociometric technique was found to be an effective method for identifying teachers who were opinion leaders in vocational agriculture. However, the sociometric technique required the administration of a questionnaire to all vocational agriculture teachers in the state, which might be somewhat cumbersome for wide-spread utilization. The key informant technique could provide an excellent alternative for the state supervisory staff in identifying opinion leaders among teachers of vocational agriculture since it correlated very highly with the sociometric technique. Key informants utilized in this study were the district supervisors of agricultural education and the results suggest that state supervisory staff members can identify opinion leaders.

The second objective of the study was to determine whether certain personal and social characteristics would assist change agents in identifying opinion leaders. Generally, it was found that opinion leaders were a great deal like other teachers of vocational agriculture and very few personal or social characteristics would distinguish them from other teachers.

District supervisors were considered by teachers of vocational agriculture to be a good source of advice and information. Therefore, the state supervisory staff should be comprised of those individuals who are change oriented if educational change is to be accelerated. Slow-to-change individuals in district supervisory positions would tend to greatly reduce the rate of educational change due to the influence they exert on teachers of vocational agriculture.

Teacher educators were not mentioned as a major source of advice and information for teachers of vocational agriculture.

No attempt was made in this study to determine why teacher educators were not named by teachers. However, the implication exists that future researchers may want to determine why this finding occurred or if it would be repeated in another state.

The findings suggested that teachers of vocational agriculture who are opinion leaders may be more innovative than their peers. Thus, opinion leaders are probably more receptive to educational change than their fellow teachers. This factor gives added emphasis to the implication that state supervisory staff members interested in creating education change should concentrate their efforts on the opinion leader. However, since most opinion leaders were categorized as early adopters and not innovators, this implies they are not the most willing group to change; a concentrated effort by the state supervisory staff may be needed to create change.

An additional implication is suggested since opinion leaders are found in all of the innovativeness categories including the laggard category. State supervisory staff members must not concentrate all of their efforts on the more innovative opinion leaders. All opinion leaders should be included in any program of planned change as teachers of vocational agriculture tend to seek out members of their own or only a slightly more innovative peer group member for advice and information. Neglecting opinion leaders who are members of the late majority and laggard innovativeness categories would result in neglect of teachers who are members of these categories.

Opinion leaders are like other teachers of vocational agriculture in relation to the number of moves made after beginning to teach vocational agriculture. However, additional findings indicated that opinion leaders had taught for a longer period of time in the position in which they were currently employed. This would possibly suggest that opinion leaders change teaching positions until a satisfactory position is located and then remain in that position for long periods of time. For the practical purpose of identifying opinion leaders, the number of moves would not be an indicator of opinion leadership.

Teachers of vocational agriculture who are opinion leaders were found to have a significantly higher income from teaching than did teachers who were not opinion leaders. On the surface this finding implies that salary level would be an indicator of opinion leadership. However, in the state in which the study was conducted, salaries of teachers were based on a state salary scale, except for local supplements. The pay scale rewarded years of service and advanced degrees. Since opinion leaders were found to have taught vocational agriculture for longer periods than their peers and had attained a higher educational level than their peers, the salary alone would not be an indicator of opinion leadership. However, salary, years of service and educational attainment could provide state supervisory staffs with a reasonable indicator of the opinion leadership possessed by individual teachers.

There were no apparent differences in the professional education and technical agriculture publications read by opinion leaders and their peers. Thus, there were no specific publications through which state supervisory staff members can reach opinion leaders with new ideas and innovations. However, making use of all publications of a professional education and technical agriculture nature and especially *The American Vocational Jouraal*, *The Agricultural Education Magazine*, and *The NEA Journal* would provide a source of new ideas for all teachers of vocational agriculture, including opinion leaders. This implication suggests greater use of the professional education and technical agriculture publications to inform teachers of vocational agriculture of the development of innovations applicable to teaching vocational agriculture. An attendent implication is that state supervisory staff personnel should increase the number of articles of an innovative nature written for publication in professional education and technical agriculture publication.

Opinion leaders have attained a significantly higher educational level than other teachers of vocational agriculture. The use of graduate credit courses for opinion leaders may not result in accelerating the rate of educational change as opinion leaders generally had completed work towards the master's degree. If advanced course work is to be of value in promoting educational change it must be oriented toward "emerging" opinion leaders who are currently engaged in advanced college work. Special invitational institutes, workshops and conferences might be the most effective means of reaching opinion leaders.

Although further research is needed to substantiate these findings, it appeared that the sociometric and the key informant techniques represent effective methods for the identification of opinion leaders in vocational agriculture. The data also suggested that in general, opinion leaders did not differ enough from their peers in personal and social characteristics to provide a reliable criterion in their identification. An understanding of the phenomena of opinion leadership in vocational education holds great promise for assisting state supervisory staffs in accelerating the rate of educational change.

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GLOSSARY

The terms listed below have been defined in order to provide a common basis for understanding the conduct of this study:

Adoption. . .a decision to continue full use of an innovation.

Adoption process. . .the mental process through which an individual passes from first hearing about an innovation to final adoption. Five stages in the adoption process are: awareness, interest, evaluation, trial, and adoption.

Change agent. . .a professional person who attempts to influence adoption decisions in a direction that he feels is desirable.

Cosmopolitism. . .the degree to which an individual's orientation is external to a particular social system.

Diffusion process. . .the spread of a new idea from its source of invention or creation to its ultimate users or adopters.

Innovation. . .an idea perceived as new by the individual.

Innovativeness. . .the degree to which an individual is relatively earlier in adopting new ideas than the other members of his social system.

Norm. . .the most frequently occurring pattern of overt behavior for the members of a particular system.

Opinion leaders. . .those indivudials from whom others seek advice and information.

Personal influence. . .communication involving a direct face-to-face exchange between the communicator and receiver, which results in changed behavior or attitutes on the part of the receiver.

Social participation. . .the degree of an individual's participation in community groups and institutions.

Social system. . .a population of individuals who are functionally differentiated and engaged in collective problem solving behavior.

Sociometric measure. . .a means of assessing the attraction within a given group. It usually involves each member of the group privately specifying a number of other persons in the group with whom he would like to engage in some particular activity, and further, a number of persons with whom he would not like to participate in the activity.

APPENDICES

A. Interview Schedule

B. Instruction Sheet for Ranking Vocational Agriculture Teachers According to Opinion Leadership Held in Specific Areas of the Vocational Agriculture Program

APPENDIX A

QUESTIONNAIRE: PERSONAL, SOCIAL AND LEADERSHIP CHARACTERISTICS OF VOCATIONAL AGRICULTURE TEACHERS

SECTION A

INSTRUCTIONS

This page is concerned with general information and your participation in certain activities. Please answer accordingly.

1. Present age ______

2. Year in which you began teaching vocational agriculture _____

3. Number of years you have been teaching vocational agriculture _____

4. Number of schools in which you have taught vocational agriculture _____

5. Number of years you have been teaching in your present position _____

6. College credit you have completed since you began teaching vocational agriculture: semester hours _____ quarter hours _____

7. Amount of schooling completed (CHECK HIGHEST)

____a. Less than bachelor's
____b. Bachelor's degree
____c. Bachelor's plus
____d. Master's degree
____e. Master's plus

8. What is the amount of your *own* money that you have invested in professional growth (e. g. summer school, correspondence courses, travel to professional meeting, etc.) during the past two years? (Include fees, registration, books, room and board, dues, magazine subscriptions, etc.) CHECK THE CLOSEST AMOUNT.

____a. $ 0-100
____b. 101-200
____c. 201-300
____d. 301-400
____e. 401-500
____f. $501-600
____g. 601-700
____h. 701-800
____i. 801-900
____j. 901-1000

____k. above $1000 . . . If above, how much?

9. List the professional educational organizations and the elective or appointive offices you have held in these organizations the last 3 years.

a. local ____
____
b. district or county-wide ______________________________
____
c. state ____
d. national ____

STOP--WAIT FOR INSTRUCTIONS BEFORE CONTINUING.

SECTION B

INSTRUCTIONS

1. List by name the organizations with which you are affiliated at the present time. An organization means some active and organized grouping, usually but not necessarily in the community or neighborhood of residence, such as club, lodge, business, political, professional or religious organization; subgroups of a church or other institution are to be included separately provided they are organized as more or less independent entities.
2. Record under attendance the mere fact of attendance or non-attendance without regard to the number of meetings attended.
3. Record under contributions the mere fact of financial contributions or absence of contributions and not the amount.
4. In the committee membership and offices columns, list only the number which you presently hold.

Name of Organization	Attendance (yes/no)	Financial Contribution (yes/no)	No. of Committee Membership	No. of Offices Held
X. Amer. Med. Assn.	Yes	Yes	2	0
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				

STOP--WAIT FOR INSTRUCTIONS BEFORE CONTINUING.

SECTION C

INSTRUCTIONS

1. Listed below are professional education publications. Please indicate which of these publications you read regularly (seldom miss reading) by placing an R in the appropriate blank. Indicate those which you read infrequently by placing an I in the appropriate blank. Circle the publications which you receive, either through subscription or through your school affiliation.

____ AVA Journal
____ NEA Journal
____ State Education Newsletter
____ Kiplingers Magazine

____ Agricultural Education Magazine
____ County Agent--Vo-Ag Teacher
____ Phi Delta Kappan
____ Technical and Educational News

____ Journal of Industrial Arts
____ School Shop
____ Journal of Home Economics
____ Practical Forecast for Home Economics

____ Balance Sheet
____ Business Education World
____ Journal of Business Education
____ National Business Education Quarterly

____ The Progressive Farmer
____ Successful Farming
____ Farm Journal
____ Doane's Agricultural Digest

____ Farm Safety Review
____ Farm Quarterly
____ The Nation's Agriculture
____ Farmers' Digest

____ Hoard's Dairyman
____ American Nurseryman
____ Plant Food Review
____ Under Glass

____ National Livestock Producer
____ Southern Planter
____ Better Crops with Plant Food
____ Better Farming Methods

____ Cropland Soils
____ South Carolina Wildlife
____ Flue Cured Tobacco Farmer
____ Poultry Digest

Other (list)
____ ________________
____ ________________
____ ________________

2. Number of professional education meetings you have attended over the past two years. (examples: NEA or AVA meetings, teacher workshops, teacher conferences, etc.) DO NOT INCLUDE LOCAL SCHOOL MEETINGS.

District ____
State ____

Regional ____
National ____

3. How many other departments of vocational agriculture did you visit last year:

   a. to attend a called meeting? _____

   b. on your own initiative? _____

4. How many other departments of instruction, such as science or industrial arts, excluding those for which you have assigned duties, did you visit last year:

   a. to attend a called meeting? _____

   b. on your own initiative? _____

STOP--WAIT FOR INSTRUCTIONS BEFORE CONTINUING.

SECTION D

I. From which vocational agriculture teacher in the state would you seek advice and information before making a major change in your program in each of the following areas. Enter one name *or* write NONE in each blank.

1. plant science ______________________________
2. animal science ______________________________
3. FFA ______________________________
4. supervised work experience ______________________
5. agricultural mechanics ______________________
6. farm management ______________________________
7. specialized programs in horticulture ______________
8. specialized programs in agricultural supply __________
9. young farmers ______________________________
10. adult farmers ______________________________
11. administering a vocational agriculture department _____ ____

II. Please check the appropriate blank for each of the following questions:

1. During the past six months have you told a vo-ag teacher about some new practice in agricultural education?
   Yes _____ No _____
2. Compared with your circle of friends in vocational agriculture, are you more or less likely to be asked for advice about new practices in agricultural education?
   Yes _____ No _____
3. Thinking back to your last discussion with vo-ag teachers about new practices in agricultural education, were you asked for your opinion of the new practice or did you ask someone else? Was asked _____ Asked someone else _____
4. When you and your friends who teach vo-ag discuss new ideas in agricultural education, what part do you play? Mainly listen _____ Try to convince them of your ideas _____
5. Which of these happens more often? You tell your neighboring agriculture teachers about some new practice? ____ They tell you about some new practice? ____

continued on next page.

6. Do you have the feeling that you are generally regarded by your fellow agriculture teachers as a *good* source of advice about new practices in agricultural education? Yes _____ No _____

III. When confronted with a specific problem in your vocational agriculture program, from which of the following sources would you typically seek the advice and/or information needed to solve the problem: (Check the single source to which you would most often refer.)

_____1. other vocational agriculture teachers

_____2. other teachers

_____3. district supervisor

_____4. teacher educator

_____5. school administrator

_____6. professional literature (periodicals, books)

_____7. advisory group or member of advisory group

_____8. other (specify) ______________________________

____

STOP--WAIT FOR INSTRUCTIONS BEFORE CONTINUING.

SECTION E

Please check the letter opposite the response to each question below which fits your situation.

1. From which source do you tend to get most of the ideas you use in teaching?

____a. Impersonal sources such as publications of various kinds, technical journals, published results of research, books, etc.
____b. Personal sources such as other teachers, administrative personnel, supervisory personnel, farmers, college professors, etc.

2. From which source do you tend to get most of the ideas you use in teaching?

____a. Sources within the field of agricultural education, such as other vo-ag teachers, magazines pertaining to agricultural education, supervisors, etc.
____b. Sources outside the field of agricultural education, such as other teachers, general magazines, lay people in business and industry, etc.

3. From which sources do you tend to get most of the ideas you use in teaching?

____a. Sources relatively close at hand such as neighboring teachers, local school personnel, publications which cross your desk automatically, other people in the community, etc.
____b. Sources relatively far afield, such as technical publications to which you usually have to subscribe, teachers working in other districts or even out of state, results observed in industry training programs, etc.

4. From which sources do you tend to get most of the ideas you use in teaching?

____a. Sources which require a cash outlay by you personally, such as books you have to buy, magazines to which you have to subscribe, courses in which you have to pay a registration fee, etc.
____b. Sources which do not require a cash outlay to you personally, such as free magazines, publisher's displays at conventions, free clinics, etc.

5. From which sources do you tend to get most of the ideas you use in teaching?

____a. Sources which do not take up a lot of your personal time, such as newsletters, other mail crossing your desk, drop-in visits during regular working hours, etc.
____b. Sources which require quite a bit of your personal time, such as summer school courses, workshops, trips, etc.

STOP--WAIT FOR INSTRUCTIONS BEFORE CONTINUING.

SECTION F

INSTRUCTIONS

Listed below are activities or practices which you may or may not be using. First, read the description of the practice or activity, then decide whether or not you have used or are using the practice. After making this decision, please provide the following information.

1. If you are using or have used the practice or activity, *estimate*, in the first space, the year the practice or activity was first used.
2. If you are not using the activity or practice and it *could apply* to your situation, place a check (✓) in the second space.
3. If you are not using the activity or practice and it *does not apply* to your situation, place a check (✓) in the third space.

Activity or Practice	Used	Not Used	
	Year First Used	But Could Apply	Does Not Apply
1. Adult programs are organized and offered in the off-farm agricultural occupations area.			
2. Agricultural interest inventories are used in counseling of prospective agriculture students.			
3. Teacher cooperates with state employment service in placing program graduates.			
4. An agricultural occupations information library is maintanied for in-school students.			
5. A unit on agricultural occupations is taught to 9th grade vocational agriculture students.			
6. Programmed instructional materials such as *Basic Welding of Joints* by Litton Industries, are used in classroom instruction.			
7. High school students are used as teacher aides, shop assistants, or equipment maintenance helpers.			

Activity or Practice	Used	Not Used	
	Year First Used	But Could Apply	Does Not Apply
8. Resource personnel such as farm equipment dealers are used in providing occupational information for classes in off-farm agricultural occupations.			
9. The principles approach is used in teaching biological, economic, or physical fundamentals.			
10. Teaching objectives deliberately and purposefully formulated in terms of desired student behavioral outcomes.			
11. Teacher works in agricultural occupations business or industry for a short period during summer to gain experience needed to offer in-school off-farm agricultural occupations programs.			
12. The game technique (example: The International Harvester Farm Management Game) is used in classroom instruction.			
13. Cooperative work experience programs in the off-farm agricultural occupations area have been developed.			
14. The overhead projector is used as teaching tool.			
15. Advisory groups have been formed in the area of off-farm agricultural occupations.			
16. Single-concept cartridge loop films are used as a teaching aid.			
17. Organized team teaching with other vocational education teachers has been utilized.			
18. Group or individualized instruction in vocational agriculture is offered for special needs students.			
19. Awards program for off-farm agricultural occupations students has been initiated.			
20. Girls are enrolled in vocational agriculture.			

Activity or Practice	Used	Not Used	
	Year First Used	But Could Apply	Does Not Apply
21. A departmental brochure is produced to inform public about expanded opportunities in vocational agriculture including off-farm agricultural occupations.			
22. Courses are named by subject matter or occupation such as Plant Science, Animal Science, Horticulture, Sales and Service, and Farm Machinery, etc., rather than Ag. I, II, III, IV.			
23. Specialized courses are offered on a semester basis so students may tailor a program.			
24. A master, cross-referenced, filing system code is used for indexing teaching aids, student materials, tests and teacher lesson plans.			
25. Color transparencies are used with overhead projector in classroom instruction.			
26. Pretest-posttest is used to improve course of instruction in agricultural occupations.			
27. Small plots are used to demonstrate improved crop practices.			

STOP--WAIT FOR INSTRUCTIONS BEFORE CONTINUING.

SECTION G

This page contains 18 statements about jobs. You are to check ✓ the phrase beside each statement that best describes how you feel about your job. There are no right or wrong answers. We would like your honest opinion on each of the statements.

STATEMENT	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
1. My job is like a hobby to me.	___	___	___	___	___
2. My job is usually interesting enough to keep me from getting bored.	___	___	___	___	___
3. It seems that my friends are more interested in their jobs.	___	___	___	___	___
4. I consider my job rather unpleasant.	___	___	___	___	___
5. I enjoy my work more than my leisure time.	___	___	___	___	___
6. I am often bored with my job.	___	___	___	___	___
7. I feel fairly well satisfied with my job.	___	___	___	___	___
8. Most of the time I have to force myself to go to work.	___	___	___	___	___
9. I am satisfied with my job for the time being.	___	___	___	___	___
10. I feel that my job is no more interesting than others I could get.	___	___	___	___	___
11. I definitely dislike my work.	___	___	___	___	___
12. I feel that I am happier in my work than most other people.	___	___	___	___	___
13. Most days I am enthusiastic about my work.	___	___	___	___	___
14. Each day of work seems like it will never end.	___	___	___	___	___
15. I like my job better than the average worker does.	___	___	___	___	___

STATEMENT	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
16. My job is pretty uninteresting	___	___	___	___	___
17. I find real enjoyment in my work.	___	___	___	___	___
18. I am disappointed that I ever took this job.	___	___	___	___	___

APPENDIX B

INSTRUCTION SHEET FOR RANKING VOCATIONAL AGRICULTURE TEACHERS ACCORDING TO OPINION LEADERSHIP HELD IN SPECIFIC AREAS OF THE VOCATIONAL AGRICULTURE PROGRAM

You have been given a deck of small cards. Each card has the name of a vocational agriculture teacher in your district. The total deck of cards contains the names of all teachers in your district.

What you are to do is to rank each of the teachers on the basis of opinion leadership held in a specific area of the vocational agriculture program. Your ranking is to be based on the following definition of opinion leaders.

> Opinion leader--vocational agriculture teacher who is influential with fellow teachers in approving or disapproving new ideas in vocational agriculture.

In order to assist you in ranking the teachers, first sort the cards into five equal stacks corresponding to the following headings.

Stack 1	Stack 2	Stack 3	Stack 4	Stack 5
Very High Degree of Opinion Leadership	High Degree of Opinion Leadership	Average Degree of Opinion Leadership	Low Degree of Opinion Leadership	Very Low Degree of Opinion Leadership

Then rank each individual teacher in the five stacks from high to low.

For example, if you have 50 teachers in your district, the first operation would be to divide the teachers into 5 stacks of 10 teachers each, according to the degree of opinion leadership held. Then each stack would be ranked from 1-10 according to the degree of opinion leadership held within each category.

After completing these operations, write the rank of each individual on the card with that individual's name.

Specific area of the vocational agriculture program in which teachers are to be ranked.

District 1	Adult Farmer
District 2	Farm Management
District 3	Agricultural Mechanics
District 4	Animal Science
District 5	FFA
District 6	Young Farmers